Usenet Newsgroup Archive: rec.ham-radio

1988

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Date span: 1988-01-04 through 1988-12-29

Source text: rec.ham-radio.txt

Source item: https://archive.org/details/usenet-rec

Messages included in this PDF: 335

Messages are presented chronologically by archived date.

Binary or encoded payloads are not printed as blocks of encoded text; a placeholder appears where such material was detected. The original source text is unchanged.

1. Re: Antenna Questions

Newsgroup: rec.ham-radio
Date: 1988-01-04 14:35:08 UTC
From: jdn@homxc.UUCP
Message-ID: <2677@homxc.UUCP>
Source record: 19840
Cross-posted to: rec.ham-radio,sci.electronics

In article <1128@scirtp.UUCP>, scott@scirtp.UUCP (Scott Crenshaw) writes:
>
> The Situation:
>
> My apartment is near the bottom of a large hill. Its surrounded
> by power lines.
Get a new apartment.
>
> Is this situation hopeless ?
Yes. You must move.

73, NK2D

Jonathan Nagy
{ihnp4|allegra|mtune}!homxc!jdn
(201) 615-4349

2. Cancer and Electromagnetic Radiation (Long)

Newsgroup: rec.ham-radio
Date: 1988-01-05 04:30:59 UTC
From: ornitz@kodak.UUCP
Message-ID: <1077@kodak.UUCP>
Source record: 19841
Cross-posted to: rec.ham-radio,sci.med,sci.electronics,sci.misc,sci.physics

In yesterday's newspaper, I noticed with great interest an article entitled

"Link suggested between cancer, electromagnetic fields."

The article had the byline of the Associated Press, Tacoma, WA. It was stated in the article that "amateur radio operators in two states appear to die at abnormally high rates from several forms of cancer, suggesting a possible link between cancer and electromagnetic fields, according to data collected by a state epidemiologist." This article appears to be prompted by work published in the American Journal of Epidemiology by Dr. Samuel Milham Jr. of the Washington Department of Social and Health Services. According to the article, Dr. Milham studied the deaths of 2,485 Washington and California amateur (ham) radio operators between 1979 and 1984. Based on a population this size, he found the following data:

Cause	Expected Deaths	Actual Deaths
Leukemia	29	36
Lymphatic & Blood Forming		
Organ Cancers	72	89
Prostate Cancer	67.6 (!)	78

I am not sure about the statistical differences between these numbers, but I am certain that a trained epidemiologist would check the statistical significance of his data before publishing. Dr. Milham is further reported to have concluded that "amateur radio operator licensees in Washington state and California have significant excess mortality due to acute myloid leukemia, multiple myeloma and perhaps certain types of malignant lymphoma."

The Associated Press article also quoted Leonard Sagan, program manager for radiation studies at the Electric Power Research Institute in Palo Alto, CA. Sagan warned that studies like Dr. Milham's could be misinterpreted, and that the "findings could be simple associations that have nothing to do with cancer causes among people who work with electricity."

Having been an amateur radio operator for over twenty-three years, and having been concerned with the safety of exposure to non-ionizing, radio frequency electromagnetic energy as a small portion of my job, I have a few comments about this article. Before I begin, I should state that my title of Dr. is not a medical one, but rather a PhD in Engineering. I should also state that I have not yet read the article in the American Journal of Epidemiology.

The medical effects of exposure to electromagnetic radiation have been shown to be frequency dependent. This is logical since as the wavelength of radiation approaches the dimensions of the human body, absorption of the radiation is enhanced due to more efficient coupling into the body. At higher frequencies (shorter wavelengths), typically in the microwave region, the electromagnetic radiation is absorbed near the surface of the body. The ANSI standards for exposure to radio frequency energy take this information into account, placing the most strict requirements on frequencies in the VHF (very high frequency) region. Amateur use of the VHF spectrum, while dating back over fifty years, has primarily been negligible until twenty years ago. Amateur transmitter power levels in the VHF region have generally been much lower than the power levels used in the high frequency bands. Antenna placement for VHF, in terms of wavelengths from the amateur's operating position, is generally high. These three facts would tend to cancel the increased hazard of VHF radiation. To test Milham's hypothesis further, a study of FM broadcast engineers, commercial two-way radio technicians, and television transmitter engineers should be performed since these persons are all exposed to various levels of VHF radiation. The highest field strengths to which amateur radio operators are normally exposed come from the near field antenna radiation during high frequency operation. Power levels of up to two kilowatts may be used with antenna placement often below a wavelength. It should be noted that exposure to this power level is intermittent in most amateur operation. If Milham's hypothesis is correct, broadcast technicians and engineers for commercial AM and especially short wave broadcast stations, as well as military communication operators should show even higher levels of cancer deaths than hams. Operation on microwave frequencies by amateur radio operators is rare; furthermore, I would expect any cancers caused by microwaves to be other than deep tissue cancers. A study of the eyes for cataracts would be in order, too, since microwave exposure generally causes eye problems prior to additional damage in the human body.

I believe that other causality should be investigated by the medical profession before Dr. Milham's conclusions are accepted. I would expect that the amateurs studied by Dr. Milham were mostly individuals who had been hams for many years. An analysis including the length of time that the amateurs were licensed (or at least active) would be in order. I believe that this analysis would show some increased mortality (adjusted for age, of course) for the older hams. If this increased mortality exists, I feel that other environmental factors should be studied in addition to exposure to electromagnetic fields.

Until twenty-five to thirty years ago, much of the amateur radio equipment in use was home constructed. The construction of electronic equipment at this and especially prior years, exposed the amateur to a number of chemical hazards, many of which were not known as hazards at the time. For example, I would expect to see higher than normal levels of metals in older hams such as tin, lead, bismuth, antimony, and cadmium (from soldering); mercury (from broken rectifier tubes and relays); barium, beryllium, and rare earth oxides (from broken vacuum tubes and phosphors from cathode ray tubes); radium (from luminescent dials); selenium (from rectifiers); and manganese and zinc (from batteries). Likewise these hams would have been

exposed to rosin fumes containing numerous organic acids (from soldering), paint solvents and cleaning fluids such as benzene and carbon tetrachloride, phenol (from burnt phenolic insulators), and asbestos. Even more insidious, however, was the exposure to transformer and capacitor impregnating oils. These oils often contained poly-chlorinated biphenyls (PCB's) as flame retardants, sometimes in quite high concentrations.

These chemical hazards were not unique to amateur radio operators only. Other electronic hobbyists as well as people manufacturing electronic equipment would have been exposed to similar hazards. I feel that it would be prudent to compare mortality rates of workers in oil-filled capacitor manufacturing plants to those of the hams studied [for example, the Sangamo capacitor plant in Pickens, SC, which until several years ago was a major user of PCB oils].

In conclusion, I believe that other causal relationships between cancer deaths and amateur radio operators may more adequately explain Milham's data. I propose that Milham or other epidemiologists expand their study to include the other occupations I have suggested above. I further propose that age-adjusted mortality rates be calculated for the existing data to determine whether length of exposure or date of exposure is significant and whether chemical exposure of these hams might be significant. I am certain that electromagnetic radiation has effects on the human body, but I do believe that electromagnetic radiation is the major cause of the increase in cancer deaths as stated by Dr. Milham.

For those persons interested in further study on the effects of electromagnetic radiation, I would suggest the American National Standards Institute document ANSI C95.1-1982, Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. This standard contains an appendix listing numerous references on the biological effects of radio-frequency electromagnetic fields. A number of other standards exist for radio-frequency and microwave exposure; many of these are listed in the Microwave Engineer's Handbook, Vol. 2.

If anyone has read Dr. Milham's original article, I would appreciate their sending me the exact title and the date of publication so I might have our library order a copy. I would also appreciate the comments of other amateurs as well as physicians on this subject. Please email responses directly to me and I will summarize or cross-post your replies to both rec.ham-radio and sci.med (many hams on ARPA receive their postings via an automatic mailing list rather than a newsgroup).

Thanks and 73 [ham radio jargon for best regards].
Barry L. Ornitz WA4VZQ


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| ___ ________ |
| | / / | | Barry L. Ornitz UUCP:..rutgers!rochester!kodak!ornitz
| | / / | | Eastman Kodak Company
| |< < K O D A K| | Eastman Chemicals Division Research Laboratories
| | \ \ | | P. O. Box 1972
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| |__\ \________| | Kingsport, TN 37662 615/229-4904
| |
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3. voice synthesizer package needed

Newsgroup: rec.ham-radio
Date: 1988-01-06 00:51:46 UTC
From: nebezene@ndsuvax.UUCP
Message-ID: <611@ndsuvax.UUCP>
Source record: 19842
Cross-posted to: rec.ham-radio,sci.electronics,comp.ai,comp.misc,comp.periphs,sci.lang,rec.games.video

I am looking for a voice synthesizer package that produces good
quality voice.

The North Dakota State University Amateur Radio Society is
developing a microprocessor-based control unit for a remote radio
site. We need a good voice synthesizer which will be interfaced to the
control unit. The audio must be of a quality that will be easily
understood when transmitted via radio. It is not necessary that the
synthesizer package come with any support hardware whatsoever.

Our budget for the interface is $100.

If you know of a device that is available, please give me
information concerning voice quality, price, and availability. Also
let me know of any special pricing for which our student club may
qualify.

Sicerely,

-Todd
--
Todd M. Bezenek --=---+---=--
___
Student of Electrical and ---=---+-I-=---
Electronics Engineering |\
---=----+----=---
Bitnet: nebezene@ndsuvax |
UUCP: uunet!ndsuvax!nebezene ^ Amateur Radio Station KO0N

4. Re: Cancer and Electromagnetic Radiation [deja vu]

Newsgroup: rec.ham-radio
Date: 1988-01-06 01:30:56 UTC
From: parnass@ihuxz.ATT.COM
Message-ID: <2519@ihuxz.ATT.COM>
Source record: 19843
Cross-posted to: rec.ham-radio,sci.med,sci.electronics,sci.misc,sci.physics

In article <1077@kodak.UUCP>, ornitz@kodak.UUCP (barry ornitz) writes:
>
> In yesterday's newspaper, I noticed with great interest an article entitled

> "Link suggested between cancer, electromagnetic fields."
>
> The article had the byline of the Associated Press, Tacoma, WA. It was
> stated in the article that "amateur radio operators in two states appear to
> die at abnormally high rates from several forms of cancer...

Ham radio operators getting cancer - sound familiar? In
1988, the press is repeating the same story published 3
years ago.

Here is the New York Times article as posted in 1985:

| From postnews Sat May 11 17:47:17 1985
| Subject: Radio Hams Prone to Leukemia? - new study cited
| Newsgroups: net.ham-radio
| Distribution: net
|
| x
| HAM RADIOS AND LEUKEMIA
|
| reprinted from the New York Times
|
| "Statistics turned up by Dr. Samuel Milham Jr., an epi-
| demiologist for Washington State, suggest that ham
| radio operators may be nearly twice as prone to
| leukemia as the rest of the population."
|
| "Reporting in a recent issue of The Lancet, Dr. Milham
| presented the results of a survey of more than 1,900
| amateur radio operators in the states of Washington and
| California who died from 1971 to 1983. After obtaining
| death certificate information for 1,691 of the sub-
| jects, he discovered that 24 had died from various
| types of leukemia. The expected number of leukemia
| victims in a suitable matched control group would have
| been 12.6. The incidence of lymphatic and monocytic
| leukemias was not higher among the radio hobbyists than
| normal, but myeloid and unspecified leukemias showed
| sharp increases."
|

| "Dr. Milham noted that in 1982 he had presented evi-
| dence of a link between leukemia and exposure to
| electrical and/or magnetic fields. His latest study,
| he said, offers 'some further support for the
| hypothesis that electromagnetic fields are carcino-
| genic.'"
|
| "In a separate study reported in The Lancet, government
| researchers in New Zealand found the leukemia rate
| unduly high for occupations involving exposure to the
| electrical and magnetic fields associated with alter-
| nating current. Comparing 546 male leukemia victims
| with 2,184 men selected as controls, the group found
| the statistics 'generally support the suggestion that
| electrical workers are at increased risk of leukemia.'"
--
===-===
Bob Parnass, Bell Telephone Laboratories - ihnp4!ihuxz!parnass - (312)979-5414

5. Re: Cancer and Electromagnetic Radiation (Long)

Newsgroup: rec.ham-radio
Date: 1988-01-06 08:35:12 UTC
From: gwyn@brl-smoke.ARPA
Message-ID: <6956@brl-smoke.ARPA>
Source record: 19844
Cross-posted to: rec.ham-radio,sci.med,sci.electronics,sci.misc,sci.physics

In article <1077@kodak.UUCP> ornitz@kodak.UUCP (barry ornitz) writes:
> Cause Expected Actual
> Leukemia 29 36
> Lymphatic etc. Cancers 72 89
> Prostate Cancer 67.6 (!) 78
>I am not sure about the statistical differences between these numbers,

That's not too hard. In lieu of further information, note that these are "rare event counts". Generally you can assume Poisson statistics in such cases. This means the probable error of the estimate is the square root of the estimated count, or approximately 6, 9, and 8 respectively. Roughly 2/3 of the time, the Actual should fall within this range of the Expected, if there is no significant correclation. Although the observed deviations are somewhat larger than expected, no one measurement has statistically significant deviation from chance at the 95% probability level. The composite probability for the set of three measurements may be such that it can be taken as an indication of a correlation (I don't want to bother with the arithmetic), but I can tell by inspection that it won't be a really strong indication.

>"amateur radio operator licensees in Washington
>state and California have significant excess mortality due to acute myloid
>leukemia, multiple myeloma and perhaps certain types of malignant
>lymphoma."

This is simply a misleading statement. Each is significant only at probability levels well below general statistical practice (90%, 95%, or 99%).

>I believe that other causality should be investigated by the medical
>profession before Dr. Milham's conclusions are accepted.

Quite right. Even a statistically significant correlation does not necessarily imply a direct causal relationship. Conclusions such as "amateur radio radiation causes cancer" cannot be reliably drawn from this evidence. I don't know whether it does or not, frankly, and the evidence is inconclusive. At best, it may guide further research (has anyone tried subjecting lab mice in large numbers to higher dosages?).

6. Re: Cancer and Electromagnetic Radiation [deja vu]

Newsgroup: rec.ham-radio
Date: 1988-01-06 15:11:44 UTC
From: feg@clyde.ATT.COM
Message-ID: <19727@clyde.ATT.COM>
Source record: 19845
Cross-posted to: rec.ham-radio,sci.med,sci.electronics,sci.misc,sci.physics

In article <2519@ihuxz.ATT.COM>, parnass@ihuxz.ATT.COM (Bob Parnass, AJ9S) writes:
> In article <1077@kodak.UUCP>, ornitz@kodak.UUCP (barry ornitz) writes:
> >
> > In yesterday's newspaper, I noticed with great interest an article entitled
>
> > "Link suggested between cancer, electromagnetic fields."
> >
> > The article had the byline of the Associated Press, Tacoma, WA. It was
> > stated in the article that "amateur radio operators in two states appear to
> > die at abnormally high rates from several forms of cancer...
>
>
> Ham radio operators getting cancer - sound familiar? In
> 1988, the press is repeating the same story published 3
> years ago.
>
> Here is the New York Times article as posted in 1985:

I am glad you posted this, as I remembered the NYT article but didn't
have it at hand.

Why is it that stories like this have several lives? It's the same with
the recurring story that video terminals are the cause of stillbirths
for women. If repeated often enough it seems these stories finally
gain credence, regardless of any other surrounding circumstances that
might account for the real causes.

Actually, I think these kind of stories play to an anti-technology
strain of mindlessness that always lies just beneath the surface of
any civilization. The press, instead of encouraging it, should
spend some time on education.

Forrest Gehrke k2bt

7. Re: voice synthesizer package needed

Newsgroup: rec.ham-radio
Date: 1988-01-07 03:20:43 UTC
From: krc@cs.purdue.EDU
Message-ID: <2879@arthur.cs.purdue.edu>
Source record: 19846
Cross-posted to: rec.ham-radio,sci.electronics,comp.ai,comp.misc,comp.periphs,sci.lang,rec.games.video

(I'm afraid to kill any of those newsgroups- later recipients may decide)

In article <611@ndsuvax.UUCP>, nebezene@ndsuvax.UUCP (Todd Michael Bezenek) writes:
> I am looking for a voice synthesizer package that produces good
> quality voice.

> ...We need a good voice synthesizer which will be interfaced to the
> control unit. The audio must be of a quality that will be easily
> understood when transmitted via radio. It is not necessary that the
> synthesizer package come with any support hardware whatsoever.

I used to play around with the General Instruments (GI) chip set. There
is a member of its SP- series morpheme(?) generators masked-out to produce
allophones. There is a companion chip based around one of its micros that
takes regular old asynch serial and spits it out to the SP-AL2 so that
you get speech from ascii. The chip has a lot of options concerning
inputs/speed/etc. so you could probably do parallel (I forget.) These
chips, and a 2k x 8 RAM (as a buffer) is all you need.

> Our budget for the interface is $100.
> Todd M. Bezenek

The best part is that you can get it all from Radio-Shit for about $40.
I got mine from GI a long time ago and just proto-boarded it (the
chips were free) just to see what it sounded like. I did'nt have the
suggested filtering, or even the right speed xtal, but it worked good
enough for me. Of course, it screws up some words (like my last name,
and doesnt know context like the difference between 'wind' (air)
and 'wind' (watch)), but that is expected. You should have seen
folks faces, though! (Shall we play a game?)

Hope this helps.
--
Kenny "_R_o_b_o_B_r_o_t_h_e_r" Crudup krc@arthur.cs.purdue.edu
Purdue University CS Dept.
W. Lafayette, IN 47907 The above is practically Official
+1 317 494 7842 University Policy. So there.

8. Re: Cancer and Electromagnetic Radiation (Long)

Newsgroup: rec.ham-radio
Date: 1988-01-07 05:29:29 UTC
From: wtm@neoucom.UUCP
Message-ID: <914@neoucom.UUCP>
Source record: 19847
Cross-posted to: rec.ham-radio,sci.med,sci.electronics,sci.misc,sci.physics

Sicne it is a medical school I work in, the recent spate of reports on the purported carcinogenic effects of electromagnetic fields has been a strong topic of converstion. I'm not convinced that the methodolgy of the study has been carfully controlled enough to rule out effects other than electromagnetic exposure. For instance, the authors make a statement to the effect: "The lukemia rate was found to be higher near the origin of power lines where the current being carried higher..." Of course people that live near the origins of power lines also typically live closer to industrial regions too, but this was not discussed.

Another interesteing thought is that the earth's steady state magnetic field is hundreds of times larger than the fields imparted by exposure to the power grid. I'm not really qualified to argue steady-sate vs. 60 Hz effects- I'd be interested in hearing from somebody who is. 60 Hz is a very long wavelength, so it would seem that it could be considered virtually steady sate -- maybe not.

At least, I'm glad that the topic is being studied. I just hope that the researchers conduct themselves in a responsible manner.

--Bill

9. Re: voice synthesizer package needed

Newsgroup: rec.ham-radio
Date: 1988-01-07 17:54:57 UTC
From: lawrence@bbn.COM
Message-ID: <5854@ccv.bbn.COM>
Source record: 19848
Cross-posted to: rec.ham-radio,sci.electronics,comp.ai,comp.misc,comp.periphs,sci.lang,rec.games.video

In article (Todd Michael Bezenek) writes:
>
>I am looking for a voice synthesizer package that produces good
>quality voice.
>
> The North Dakota State University Amateur Radio Society is
>developing a microprocessor-based control unit for a remote radio
>site. We need a good voice synthesizer which will be interfaced to the
>control unit. The audio must be of a quality that will be easily
>understood when transmitted via radio. It is not necessary that the
>synthesizer package come with any support hardware whatsoever.
>
> Our budget for the interface is $100.
>
>Sincerely,
>
>Todd M. Bezenek

Check out the "What's New" article on pg. 86 of the January '88 BYTE citing the new Heath HV-2000 speech processing system. It's an IBM-compatible half-size plug in card consisting of a speech synthesizer, audio amplifier, a speaker, and a 60K buffer. It will read ASCII text files or ASCII data received through the serial port and it even includes some terminal-emulation software to add speech to modem communications.

Technically speaking, the HV-2000 uses a basic set of 64 phonemes for word and/or sentence construction and allows you to specify up to 4 durations, 16 rates, 4096 inflection levels, 32 transition levels, 8 transition rates, 8 articulation rates, 49 musical notes and 16 amplitude settings. Pricing for these things is $89.95/each. Not bad considering I used to work for a company which used those stupid VOTRAX beasts which costs us $400.00/each...

Details and orders should be addressed to Heath Company, Dept. 350-020, Hilltop Rd., Benton Harbor, MI 49022.

Please send them all net inquiries, I know nothing beyond what I've described in this posting. Having never even _seen_ one of these boards, all standard disclaimers apply.

=Gabriel Lawrence=
=BBN Communications=

USENET: ...!harvard!bbn!ccv!lawrence
INTERNET: lawrence@bbn.com

10. Re: Cancer and Electromagnetic Radiation

Newsgroup: rec.ham-radio
Date: 1988-01-07 18:49:16 UTC
From: keithl@vice.TEK.COM
Message-ID: <2174@vice.TEK.COM>
Source record: 19849
Cross-posted to: rec.ham-radio,sci.med,sci.electronics,sci.misc,sci.physics

There may or may not be something here, but it can't be found simply by
counting death certificates. For example: what if, for some reason,
hams have a lower heart disease rate than the general population, and
live longer? Cancer primarily strikes in old age. A cure for heart
disease would show up in non-age-specific statistics as a powerful carcinogen.
How old were those hams when they died?

--
Keith Lofstrom ...!tektronix!vice!keithl keithl@vice.TEK.COM
MS 59-316, Tektronix, PO 500, Beaverton OR 97077 (503)-627-4052

11. Re: voice synthesizer package needed

Newsgroup: rec.ham-radio
Date: 1988-01-07 22:30:10 UTC
From: wtm@neoucom.UUCP
Message-ID: <917@neoucom.UUCP>
Source record: 19850
Cross-posted to: rec.ham-radio,sci.electronics,comp.ai,comp.misc,comp.periphs,sci.lang,rec.games.video

If you haven't already bought the control computer, the Commodore-Amgia 500 might bear some investigation. It goes for about $US600 w/o monitor. It has a built-in 880K 3.5 inch disk drive. It aslo has two 8-bit DACs.

The DACs can be controlled to output sound via a DMA channel under CPU control. The Amiga O/S comes with a utility program called "say" that does text-to-speech conversion directly to the internal DACs. The quality of the speech is very good and the program has a variety of tunable parameters to allow the user to optimize the speech sound quality. The Microsoft Basic interpreter that comes with the system can also output speech via a "say" statement. You have your choice of using phonetics or using the text-to-speech algorithm.

So, if you still need the computer, this speech synthesizer is essentially free.

--Bill

12. Re: Cancer and Electromagnetic Radiation (Long)

Newsgroup: rec.ham-radio
Date: 1988-01-07 23:28:34 UTC
From: caf@omen.UUCP
Message-ID: <629@omen.UUCP>
Source record: 19851
Cross-posted to: rec.ham-radio,sci.med,sci.electronics,sci.misc,sci.physics

```
: Expected Actual
: Cause Deaths Deaths
:------------------------------------------------------------------------
: Leukemia 29 36
: Lymphatic & Blood Forming
: Organ Cancers 72 89
: Prostate Cancer 67.6 (!) 78
```

With such weak evidence as this, I'm surprised the author came to any conclusions at all! (The other figures are undoubtedly less convincing, otherwise they would have been published.)

While Ham Radio fans come from all walks of life, I'd be positively amazed if they represent a precise cross section of the general population. More likely, the ham radio population is significantly skewed in favor of technicians, tinkerers and craftsmen, and these are not 50th per centile of anything, in most ways one might care to measure. There are probabaly more "nerds" than football fullbacks in ham radio, and their medical profiles may differ as well.

In the meantime, I nominate Milham honary editor of the Journal of Irreproducible Results.

Chuck Forsberg WA7KGX Author of YMODEM, ZMODEM, Professional-YAM, ZCOMM, and DSZ
...!tektronix!reed!omen!caf Omen Technology Inc "The High Reliability Software"
17505-V Northwest Sauvie Island Road Portland OR 97231 VOICE:503-621-3406:VOICE
TeleGodzilla BBS: 621-3746 19200/2400/1200 CIS:70007,2304 Genie:CAF
omen Any ACU 2400 1-503-621-3746 se:--se: link ord: Giznoid in:--in: uucp
omen!/usr/spool/uucppublic/FILES lists all uucp-able files, updated hourly

13. Re: Cancer and Electromagnetic Radiation

Newsgroup: rec.ham-radio
Date: 1988-01-08 05:28:20 UTC
From: greg@mind.UUCP
Message-ID: <1562@mind.UUCP>
Source record: 19852
Cross-posted to: rec.ham-radio,sci.med,sci.electronics,sci.misc,sci.physics

In article <2174@vice.TEK.COM> keithl@vice.TEK.COM (Keith Lofstrom) writes:
>There may or may not be something here, but it can't be found simply by
>counting death certificates. For example: what if, for some reason,
>hams have a lower heart disease rate than the general population, and
>live longer? Cancer primarily strikes in old age. A cure for heart
>disease would show up in non-age-specific statistics as a powerful carcinogen.
>How old were those hams when they died?

Let's not forget that hams are also not a random sampling. For
starters, they probably have much higher disposable income than
average... which would affect a number of other things, such as diet,
travel, and so on. Given these factors, I don't find the
slightly-higher-than-expected numbers that surprising.

--

greg

14. Re: voice synthesizer package needed

Newsgroup: rec.ham-radio
Date: 1988-01-09 00:18:43 UTC
From: peter@catuc.UUCP
Message-ID: <2764@catuc.UUCP>
Source record: 19853
Cross-posted to: rec.ham-radio,sci.electronics,comp.ai,comp.misc,comp.periphs,sci.lang,rec.games.video

In article <5854@ccv.bbn.COM>, lawrence@bbn.COM (Gabe Lawrence) writes:
> In article (Todd Michael Bezenek) writes:
> >
> >I am looking for a voice synthesizer package that produces good
> >quality voice.
> >
>
> Check out the "What's New" article on pg. 86 of the January '88 BYTE citing
> the new Heath HV-2000 speech processing system. It's an IBM-compatible
> half-size plug in card consisting of a speech synthesizer, audio amplifier,
> a speaker, and a 60K buffer. It will read ASCII text files or ASCII data
.....

I've played with this board at a local Heath store. Not bad for the price
but be carefull - the pc board itself is not of that great quality. The
local Heath Tech and myself managed to inadvertantly lift several traces
off the board while trying to debug the board after he assembled the kit.
I hope Heath comes out with a new batch of higher quality boards.

> =Gabriel Lawrence=
> =BBN Communications=

peter collins
Computer Automation

15. Re: Cancer and Electromagnetic Radiation

Newsgroup: rec.ham-radio
Date: 1988-01-09 17:56:10 UTC
From: robert@uop.edu
Message-ID: <886@uop.edu>
Source record: 19854
Cross-posted to: rec.ham-radio,sci.med,sci.electronics,sci.misc,sci.physics

In article <1562@mind.UUCP>, greg@mind.UUCP (Greg Nowak) writes:
> In article <2174@vice.TEK.COM> keithl@vice.TEK.COM (Keith Lofstrom) writes:
> Let's not forget that hams are also not a random sampling. For
> starters, they probably have much higher disposable income than
> average... which would affect a number of other things, such as diet,
> travel, and so on. Given these factors, I don't find the

also many hams i know are vets, that is to say, they were exposed to
situations and environs that most of us were not.. my room-mate dan,
his dad was with the 101st ABN in WW-II. he was later used in nuke
tests, he and his group were in trenches 10 miles from a test, all the
guys at the 8 mile trench are dead or on the way with cancer and
other auto immune troubles.. not to say this is true for everyone,
but many hams i know have been in military or other technical service,
and exposed to more than their share of many things..

16. Does the ECPA have teeth yet ?

Newsgroup: rec.ham-radio
Date: 1988-01-14 02:08:00 UTC
From: die@frog.UUCP
Message-ID: <1999@frog.UUCP>
Source record: 19855
Cross-posted to: rec.ham-radio,sci.electronics,misc.legal

cases) under the provisions of the Electronic Communications Privacy Act of 1986 to listen to (intercept) certain radio communications. Does anyone out there know if there have been any actual criminal investigations, arrests, prosecutions, convictions, fines or jail sentences, or administrative actions such as FCC license revocations for violations of the radio privacy provisions of this new law ? In particular have there been any actual court interpretations of the its confusing and peculiar distinctions between different types of radio signals (and different penalties for intercepting them) ?

It was widely reported at the time the law was passed that the justice department did not intend to prosecute anyone for violations of the law unless they were doing so for a clearly criminal purpose (EG such obviously criminal activities as intercepting microwave telephone calls from stores to credit authorization centers to steal credit card numbers would be prosecuted, but merely tuning around that spectrum to see what was there would not be). Has this policy changed or is it likely to change with a new administration in Washington ?

If there have been any prosecutions at all, have any of them been of private individuals (hams/swls/rf hackers) for listening to radio or satellite communications in the privacy of their homes motivated entirely by curiosity about what is out there and/or by the technical challenge of receiving and demodulating the signal and without any criminal purpose whatsoever ? I suspect that a reasonable large percentage of readers of rec.ham-radio have technically violated the law in this spirit (as the widespread interest in cutting D513 to enable cellular coverage in the PRO-2004 indicates); even though hams are notoriously law abiding I suspect many feel the law is unenforcable or are simply ignorant of its fierce provisions since it has been so very little publicized.

If anybody out there knows of specific court cases it would very valuable if they could post that information to the net - as many questions remain about what this seemingly unenforcable law actually means in a practical sense to those of us who peer at the rf spectrum as a part of our hobby.

--

David I. Emery
Charles River Data Systems
983 Concord St.
Framingham, MA 01701
Tel: (617) 626-1102

```
uucp: ...!decvax!frog!die
```

17. Re: Does the ECPA have teeth yet ?

Newsgroup: rec.ham-radio
Date: 1988-01-14 12:55:56 UTC
From: turpin@ut-sally.UUCP
Message-ID: <10089@ut-sally.UUCP>
Source record: 19856
Cross-posted to: rec.ham-radio,sci.electronics,misc.legal

In article <1999@frog.UUCP>, die@frog.UUCP (Dave Emery) writes:
It has now been a year that it has been illegal (a felony in many
> cases) under the provisions of the Electronic Communications Privacy Act of
> 1986 to listen to (intercept) certain radio communications.

This is a terrible law. If they do not want me to receive them,
they ought to keep their radio waves out of my back yard. If they
don't want me to understand them, they ought to encrypt their
communication. If I figure out what it says, it wasn't truly
encrypted.

Russell

18. Re: Does the ECPA have teeth yet ?

Newsgroup: rec.ham-radio
Date: 1988-01-14 13:58:00 UTC
From: die@frog.UUCP
Message-ID: <2000@frog.UUCP>
Source record: 19857
Cross-posted to: rec.ham-radio,sci.electronics,misc.legal

(Sorry for repeat - previous post of this was trunctated)

It has now been one year since it became illegal (a felony in many circumstances) under the provisions of the Electronic Communications Privacy Act of 1986 to listen to (intercept) certain radio communications. Does anyone out there know if there have been any actual criminal investigations, arrests, prosecutions, convictions, fines, jail sentences, or administrative actions such as FCC license revocations for violations of the radio privacy provisions of this new law ? In particular have there been any actual court interpretations of the its confusing and peculiar distinctions between different types of radio signals (and drastically different penalties for intercepting them) ?

It was widely reported at the time the ECPA was passed that the justice department did not intend to prosecute anyone for violations of this law unless they were doing so for a clearly criminal purpose (EG such obviously criminal activities as intercepting microwave telephone calls from stores to credit authorization centers to steal credit card numbers would be prosecuted, but merely tuning around that spectrum to see what was there would not be). Does anybody know if this policy has changed ? Is it likely to change with a new administration in Washington ?

If there have been any prosecutions at all, have any of them been of private individuals (hams/swls/rf hackers) for merely listening to radio or satellite communications in the privacy of their homes ? Were these all cases where there was some sort of criminal purpose or at least the intent to steal a service (such as pirating scrambled satellite TV) ? Or have there also been cases where hams/swls/rf hackers were prosecuted for interception of radio or satellite signals when such individuals were evidently motivated more or less entirely by a desire to listen to interesting 'action' or by curiosity about what is out there or by the technical challenge of receiving and demodulating and making sense of complex signals and seemingly had no criminal purpose whatever?

I suspect that a surprisingly large percentage of readers of rec.ham-radio have technically violated the law in this later spirit (as the widespread interest in cutting D513 to enable cellular coverage in the PRO-2004 indicates); even though hams are notoriously law abiding I suspect many feel the law is unenforcable or are simply ignorant of its fierce provisions since it has been so very little publicized.

If anybody out there knows of specific ECPA court cases it would very valuable if they could post that information to the net - as many questions remain about what this seemingly unenforcable law actually means in a practical sense to those of us who peer at the other regions of the rf

spectrum as a part of our hobby.

David I. Emery
Charles River Data Systems
983 Concord St.
Framingham, MA 01701
Tel: (617) 626-1102
uucp: ...!decvax!frog!die

19. Re: Does the ECPA have teeth yet ?

Newsgroup: rec.ham-radio
Date: 1988-01-14 19:44:37 UTC
From: markb@sdcrdcf.UUCP
Message-ID: <5064@sdcrdcf.UUCP>
Source record: 19858
Cross-posted to: rec.ham-radio,sci.electronics,misc.legal

Look, the FCC doesn't even have enough enforcement personal to enforce the regulations from before ECPA much less do nay thing about it as well.

Case in point: There are a bunch of idiots in So. LA who have illegal high wattage CB outfits, who have at times made ANY use of auto CB units in the LA basin impossible. Even though the local CB clubs have complained multiple times over the course of the last 5-7 years, the FCC has done nothing about it. The reason being that the FCC has only 2 investigators for the whole southern CA area (LA, Orange and Sna Deigo counties). These overworked people have enough problems worring about interference with commercial broadcasting to do any thing about citizen complaints.

Mark Biggar
{allegra,burdvax,cbosgd,hplabs,ihnp4,akgua,sdcsvax}!sdcrdcf!markb
markb@rdcf.sm.unisys.com

20. Use a VLF rcvr to decode TV's secondary audio programming

Newsgroup: rec.ham-radio
Date: 1988-01-18 01:12:35 UTC
From: parnass@ihuxz.ATT.COM
Message-ID: <2547@ihuxz.ATT.COM>
Source record: 19859
Cross-posted to: rec.ham-radio,sci.electronics

x
Television stations can transmit 2 audio signals simul-
taneously. The alternate audio information can be car-
ried as the Secondary Audio Program (SAP), on an FM sub-
carrier.

Area TV stations had not used SAP until December 20, when
channel 9 provided bilingual coverage for a Chicago
Christmas parade. English was carried on the main chan-
nel, and Spanish was transmitted on a 78 KHz FM subcar-
rier.

One can tune a VLF receiver to 78 KHz FM (or use AM and
slope detection), and connect its antenna jack to the
earphone jack of the television tuned to the appropriate
channel.

Instead of using my TV, I just tuned my ICOM R7000 to the
191.775 MHz channel 9 WBFM audio carrier, then connected
my ICOM R71A receiver to the R7000's RECord jack. The
R71A was set to the NBFM mode at 78 KHz.
--
===-===-===-===-===-===-===-===-===-===-===-===-===-===-===-===-===-===-===-===
Bob Parnass, Bell Telephone Laboratories - ihnp4!ihuxz!parnass - (312)979-5414

21. Re: Does the ECPA have teeth yet ?

Newsgroup: rec.ham-radio
Date: 1988-01-18 20:05:46 UTC
From: stevem@fai.UUCP
Message-ID: <675@fai.UUCP>
Source record: 19860
Cross-posted to: rec.ham-radio,sci.electronics,misc.legal

In article <1999@frog.UUCP> die@frog.UUCP (Dave Emery) writes:
>cases) under the provisions of the Electronic Communications Privacy Act of
>1986 to listen to (intercept) certain radio communications. Does anyone
>out there know if there have been any actual criminal investigations, arrests,
>prosecutions, convictions, fines or jail sentences, or administrative actions
>such as FCC license revocations for violations of the radio privacy provisions
>of this new law ? In particular have there been any actual court
>interpretations of the its confusing and peculiar distinctions between
>different types of radio signals (and different penalties for intercepting
>them) ?
>
> It was widely reported at the time the law was passed that the
>justice department did not intend to prosecute anyone for violations of
>the law unless they were doing so for a clearly criminal purpose (EG such
>obviously criminal activities as intercepting microwave telephone calls from
>stores to credit authorization centers to steal credit card numbers would
>be prosecuted, but merely tuning around that spectrum to see what was there
>would not be). Has this policy changed or is it likely to change
>with a new administration in Washington ?
>
> If anybody out there knows of specific court cases it would very
>valuable if they could post that information to the net - as many questions
>remain about what this seemingly unenforcable law actually means in a
>practical sense to those of us who peer at the rf spectrum as a part of
>our hobby.

It seems to me if I remember correctly, that this law was used to arrest some
drug dealers in the L.A. area about six months ago.

--

Steven A. Minneman (Fujitsu America Inc, San Jose, Ca)
!seismo!amdahl!fai!stevem

The best government is no government at all.

22. Humor

Newsgroup: rec.ham-radio
Date: 1988-01-18 20:46:26 UTC
From: ewb@raybed2.UUCP
Message-ID: <1113@raybed2.UUCP>
Source record: 19861
Cross-posted to: rec.aviation,rec.ham-radio,sci.electronics

Enclosed is a list of postulates, laws, observations, etc that apply to hobbiest of all sorts, wether it's airplanes, ham radio, or other projects that you build. I hope you enjoy them.

BOOB'S LAW:
You'll always find a tool in the last place you look

RAP'S INANIMATE REPRODUCTION LAW:
If you take something apart and put it back together again enough times, you will eventually have two of them.

GOLUB'S 2nd LAW OF HOMEBUILDING:
A carelessly planned homebuilding project takes three times longer than expected to complete; a carefully planned one takes only twice as long.

HORNER'S FIVE THUMB POSTULATE:
Experience varies directly with material ruined.

BRAUCH'S OBSERVATION:
If all you have is a hammer, then everything looks like a nail.

BROMBERGS LAW OF TOOL USE:
When the need arises, the tool or object closest to you becomes a hammer.

THE ROMAN RULE:
The one who say's that it can't be done, should not interrupt the one who is doing it.

THE 90-90 RULE:
The first 90% of a project takes 10% of the time, and tha last 10% takes 90% of the time.

ENG'S PRINCIPLE:
The easier it is to do, the harder it is to change.

SCHMIDT'S LW;
If you fiddle with a thing long enough, it will break.

BUNGEY'S 1st LAW:
The nut won't go on until you utter the magic word.

BUNGEY'S 2nd LAW:
When your about to use the magic word, there will be children present.

LAW OF THE SEARCH:
The first place to look for a droped part is the last place you expect to find it.

RINGWALD'S LAW OF WORKBENCH GEOMETRY:
A horrizontal surface will soon be piled up.

NAESER'S LAW:
You can make it foolproof, but you cannot make it dxxx foolproof.

WETHERN'S LAW OF SUSPENDED JUDGEMENT:
Assumption is the mother of all screw-ups.

FEMO'S LAW OF HOMEBUILDING:
If you drop something, it will never hit the ground.

PRISSY'S RULE:
If you don't know what you're doing, do it neatly.

TELECO'S 2nd LAW:
There are two kinds of tape, the one that won't stay on, and the one that won't come off.

JAFFE'S PRECEPT:
There are some things that are impossible to do, but it is impossible to know what they are.

BEACHES LAW:
No two identical parts are alike.

THE FIRST RULE OF INTELLIGENT TINKERING:
Save all parts.

re-printed from the ALANTIC FLYER MAGAZINE, Jan. '88, p. B20

23. Re: Use a VLF rcvr to decode TV's secondary audio programming

Newsgroup: rec.ham-radio
Date: 1988-01-19 05:48:23 UTC
From: kaufman@Shasta.STANFORD.EDU
Message-ID: <2411@Shasta.STANFORD.EDU>
Source record: 19862
Cross-posted to: rec.ham-radio,sci.electronics

In article <2547@ihuxz.ATT.COM> parnass@ihuxz.ATT.COM (Bob Parnass, AJ9S) writes:

> Instead of using my TV, I just tuned my ICOM R7000 to the
> 191.775 MHz channel 9 WBFM audio carrier, then connected
> my ICOM R71A receiver to the R7000's RECord jack. The
> R71A was set to the NBFM mode at 78 KHz.

An easier way to do it with that pair, is to take the 10.7 MHz IF from
the R7000 and feed it to the converter input of the (in my case IC751).
Then tune to 10.778 in NBFM.
The rejection of the main channel is not as good, though.

Marc Kaufman (kaufman@Shasta.stanford.edu)

24. Re: Humor

Newsgroup: rec.ham-radio
Date: 1988-01-19 18:12:16 UTC
From: kludge@pyr.gatech.EDU
Message-ID: <4831@pyr.gatech.EDU>
Source record: 19863
Cross-posted to: rec.aviation,rec.ham-radio,sci.electronics

In article <1113@raybed2.UUCP> ewb@raybed2.UUCP (EUGENE BALINSKI) writes:
>Enclosed is a list of postulates, laws, observations, etc that apply to
>hobbiest of all sorts, wether it's airplanes, ham radio, or other
>projects that you build. I hope you enjoy them.

1. After a system is assembled, parts will be left on the bench.

2. A twenty-dollar power transistor will protect a fifty-cent fuse by
blowing first.

3. Sooner or later, you will ground the B+.

4. You will ground an RF supply too. You won't notice it until
you power up and touch the chassis.

5. When you have removed all 15 screws from the crystal oven, you will
find that you have opened the wrong one.

6. When you go back to assemble it again, you will find three screws
missing.

7. The tube substitution handbook is never wrong. It's supposed to
be bright cherry red.

8. Someone will use the same type of connector for power and signal.
You know what will happen.

Scott Dorsey Kaptain_Kludge
SnailMail: ICS Programming Lab, Georgia Tech, Box 36681, Atlanta, Georgia 30332

"To converse at the distance of the Indes by means of sympathetic
contrivances may be as natural to future times as to us is a
literary correspondance." -- Joseph Glanvill, 1661

Internet: kludge@pyr.gatech.edu
uucp: ...!{decvax,hplabs,ihnp4,linus,rutgers,seismo}!gatech!gitpyr!kludge

25. Re: Humor

Newsgroup: rec.ham-radio
Date: 1988-01-19 21:06:22 UTC
From: price@marlin.NOSC.MIL
Message-ID: <1019@marlin.NOSC.MIL>
Source record: 19864
Cross-posted to: rec.aviation,rec.ham-radio,sci.electronics

Please add to the list, the LAW OF SELECTIVE GRAVITATION which says that a hammer dropped on a workbench will land such that it does the most expensive damage possible.

--Jim Price, PRICE@NOSC.MIL

26. Re: Does the ECPA have teeth yet ?

Newsgroup: rec.ham-radio
Date: 1988-01-20 06:56:05 UTC
From: robert@uop.edu
Message-ID: <924@uop.edu>
Source record: 19865
Cross-posted to: rec.ham-radio,sci.electronics,misc.legal

It was mentioned that drug dealers had been arrested for misuse of
the law...

I am not aware of that particular case, but I was under the impression
that the communications act of 1934 covers such an offense, if it is
say, using a scanner to intercept, and thereby locate police traffic
pertaining to "your" crime.

Locally we had some dealers arrested, but they were arrested for being
dealers due to a ham that turned them in, seems the geek-dealer was
sitting by the pool, making his deals over his CORDLESS PHONE.

:-)

Some people, they just don't know!

27. Re: Re: Does the ECPA have teeth yet ?

Newsgroup: rec.ham-radio
Date: 1988-01-20 08:00:52 UTC
From: gnome@oliveb.olivetti.com
Message-ID: <13293@oliveb.olivetti.com>
Source record: 19866
Cross-posted to: rec.ham-radio,sci.electronics,misc.legal

It was obvious from the start that the ECPA was designed to do two things.

1) Give cellular phone sales people a warm, cozy feeling and
2) Enable the FCC/federal government to use the law for selective
enforcement.
Not to mention that it now makes it easier to designate more areas
"hear no evil" zones that you can be arrested for listenning to...

Gary

28. Personal for jeff@olivej.ATC.OLIVETTI (Jeff Lim)

Newsgroup: rec.ham-radio
Date: 1988-01-20 20:15:02 UTC
From: jans@tekcrl.TEK.COM
Message-ID: <2239@tekcrl.TEK.COM>
Source record: 19867
Cross-posted to: rec.ham-radio,sci.electronics

(Apologies to the rest of you -- I could not get this through the mail to Jeff.)

<... Could you give me some reference as to how to make a Balun and what formulas you use for calculating the broadband characteristics?...>

Jim,
Most of what I know is from "Transmission Line Transformers", by Dr. Jerry Sevick, C 1987. This book is published and sold by The American Radio Relay League, 225 Main St., Newington, CT 06111. The book is $10; they require $2.50 for book rate shipping, or $3.50 for UPS shipping. Good luck on your project!

:::::: Software Productivity Technologies --- Smalltalk Project ::::::
:::::: Jan Steinman N7JDB Box 500, MS 50-470 (w)503/627-5881 ::::::
:::::: jans@tekcrl.TEK.COM Beaverton, OR 97077 (h)503/657-7703 ::::::
--
(Stamp out facist .signature restrictions!)

29. Re: Does the ECPA have teeth yet ?

Newsgroup: rec.ham-radio
Date: 1988-01-23 09:14:00 UTC
From: die@frog.UUCP
Message-ID: <2027@frog.UUCP>
Source record: 19868
Cross-posted to: rec.ham-radio,sci.electronics,misc.legal

In article <675@fai.UUCP> stevem@fai.UUCP (Steve Minneman) writes:
>
>It seems to me if I remember correctly, that this law was used to arrest some
>drug dealers in the L.A. area about six months ago.
>

For intercepting what radio transmissions ? (cellular phones, or police, DEA, or FBI microwave links, or other drug dealers pagers?). If you have any details please post a further description of how this law that forbids listening to certain kinds of radio traffic now made private by legislative fiat was applied to prosecuting drug dealers.

I understand the ECPA as specifically allowing normal scanner type monitoring of law enforcement and governmental nbfm VHF and UHF radio channels. This would seem to include most radio communications used by the anti-drug law enforcement types (DEA ect). It would be very interesting if the law has been applied to this (very popular and common) type of listening even if the listener had a serious criminal purpose in mind.

It is also true that the ECPA has several sections that apply to computer system security (anti-hacker provisions) rather than to illegal interception of electronic communications traveling via radio. Perhaps the prosecution was on the basis of some crime other than passively listening to a radio signal ?

30. Re: Does the ECPA have teeth yet ?

Newsgroup: rec.ham-radio
Date: 1988-01-25 14:09:37 UTC
From: daveb@geac.UUCP
Message-ID: <2164@geac.UUCP>
Source record: 19869
Cross-posted to: rec.ham-radio,sci.electronics,misc.legal

In article <10089@ut-sally.UUCP> turpin@ut-sally.UUCP (Russell Turpin) writes:
>In article <1999@frog.UUCP>, die@frog.UUCP (Dave Emery) writes:
> It has now been a year that it has been illegal (a felony in many
>> cases) under the provisions of the Electronic Communications Privacy Act of
>> 1986 to listen to (intercept) certain radio communications.
>
>This is a terrible law. If they do not want me to receive them,
>they ought to keep their radio waves out of my back yard. If they

If memory serves (and it may not, I was a minor when it was last
discussed), "interception" was interpreted in Canada as just that: the
capture of the message and its possible destruction.
A lawyer will have to comment on the applicability of
"eavesdropping as interception" in the US, and the legality of such
under international agreements re the use of the electromagnetic
spectrum.

--dave (darn! I wish I was older) c-b
--
David Collier-Brown. {mnetor yetti utgpu}!geac!daveb
Geac Computers International Inc., | Computer Science loses its
350 Steelcase Road,Markham, Ontario, | memory (if not its mind)
CANADA, L3R 1B3 (416) 475-0525 x3279 | every 6 months.

31. Program to generate audible Morse code.

Newsgroup: rec.ham-radio
Date: 1988-01-27 16:03:31 UTC
From: kev@voder.UUCP
Message-ID: <3049@voder.UUCP>
Source record: 19870
Cross-posted to: comp.binaries.ibm.pc,comp.sys.cbm,comp.sys.ibm.pc,rec.ham-radio

I am looking for programs that will generate audible Morse code through a computer's sound generation facilities. I would appreciate programs for both a Commodore 64 and an IBM XT clone. The main features that I am looking for are the ability to vary the speed that each individual letter is sent and the time between each character; i.e., send a letter's code, at say, 15 words per minute but have each individual letter sent at 5 wpm. If the program can generate random characters or convert a text file to code are also very useful.

My wife and children and I are studying for the amatuer radio novice license. We have the code tapes from the ARRL. They are vary good, but after they are used for any length of time, it becomes too easy to anticipate what character will be sent next. Hopefully there is a computer program that will help us to study code without the prospect of being able to anticipate what the next letter will be.

It would probably be best to send the program code to me via email.

Thank you very much to all who help.

Kevin Hoskins

32. Re: Does the ECPA have teeth yet ?

Newsgroup: rec.ham-radio
Date: 1988-01-27 21:55:02 UTC
From: ron@topaz.rutgers.edu
Message-ID: <17649@topaz.rutgers.edu>
Source record: 19871
Cross-posted to: rec.ham-radio,sci.electronics,misc.legal

The text of ECPA is quite clear that "unauthorized reception" is illegal.

-Ron

33. Re: Does the ECPA have teeth yet ?

Newsgroup: rec.ham-radio
Date: 1988-01-28 03:12:33 UTC
From: leonard@qiclab.UUCP
Message-ID: <930@qiclab.UUCP>
Source record: 19872
Cross-posted to: rec.ham-radio,sci.electronics,misc.legal

In article <2027@frog.UUCP> die@X.UUCP (David I. Emery) writes:
< I understand the ECPA as specifically allowing normal scanner type
<monitoring of law enforcement and governmental nbfm VHF and UHF radio
<channels. This would seem to include most radio communications used by
<the anti-drug law enforcement types (DEA ect). It would be very interesting
<if the law has been applied to this (very popular and common) type of
<listening even if the listener had a serious criminal purpose in mind.

It is *my* understanding from what I've seen in various sources, that ECPA basicly prohibits listening to *any* transmission not specificly intended for you or for the general public. Thus, the only stations you could legally monitor are:
AM broadcasters
FM broadcasters
TV broadcasters
Shortwave broadcasters (BBC etc)
Amateur radio stations
CB stations

Note that ECPA *specificly* prohibits reception of scrambled signals, and tramissions which were made with the expectation that they would be private (whatever the hell *that* is supposed to mean!).

I could easily be wrong on *large* portions of the above. Could one of the *real lawyers* out there check into this and give us a run-down? As a matter of fact, I'd be willing to pay as much as $10 for a booklet that translated ECPA into plain English, with a section by section commentary on what the practical meaning was. I suspect others would too!

It would even help if the info on practical effects was only of the form: "this means *at least* X is forbidden, Y is probably illegal too, and Z might be"

--
Leonard Erickson ...!tektronix!reed!percival!bucket!leonard
CIS: [70465,203] ...!tektronix!reed!qiclab!leonard
"I used to be a hacker. Now I'm a 'microcomputer specialist'.
You know... I'd rather be a hacker."

34. Re: Program to generate audible Morse code.

Newsgroup: rec.ham-radio
Date: 1988-01-28 17:43:31 UTC
From: davidsen@steinmetz.steinmetz.UUCP
Message-ID: <9353@steinmetz.steinmetz.UUCP>
Source record: 19873
Cross-posted to: comp.binaries.ibm.pc,comp.sys.cbm,comp.sys.ibm.pc,rec.ham-radio

In article <3049@voder.UUCP> kev@voder.UUCP (Kevin Hoskins) writes:
>
> I am looking for programs that will generate audible Morse code through a
>computer's sound generation facilities. I would appreciate programs for both
>a Commodore 64 and an IBM XT clone. The main features that I am looking for

I have no idea what it will take to get this running on a C64, but it's
in BASIC, so you should be able to do it.

---------- morse.bas, I didn't write it ----------

```
10 ' A BASIC CODE TRAINER - KH6FHN/4 BOX 3292, MCLEAN VA 22103
20 ' TAKEN FROM "COMPUTER TRADER" ISSUE OF JULY, 1984
30 ' MODIFICATIONS BY N6MPP (GILLMANN@ISIB.ARPA)
40 ' PROGRAM SPEED VARIES AMONG BASIC BASICA BASCOM AND AMONG PC/AT/PCJR
45 ' SET CONSTANT M5 TO ADJUST FOR THIS
50 RANDOMIZE TIMER
60 O=VAL(MID$(TIME$,7,2))+10*VAL(MID$(TIME$,4,2))
70 FOR I=1 TO O : R=RND : NEXT I
80 DIM A$(100)
90 HBNDA = 44
100 REM SINGLE
110 A$(1) = "E."
120 A$(2) = "T-"
130 REM DOUBLE
140 A$(3) = "A.-"
150 A$(4) = "I.."
160 A$(5) = "M--"
170 A$(6) = "N-."
180 REM TRIPLE
190 A$(7) = "D-.."
200 A$(8) = "G--."
210 A$(9) = "K-.-"
220 A$(10) = "O---"
230 A$(11) = "R.-."
240 A$(12) = "S..."
250 A$(13) = "U..-"
260 A$(14) = "W.--"
270 REM QUADRUPLE
280 A$(15) = "B-..."
290 A$(16) = "C-.-."
300 A$(17) = "F..-."
310 A$(18) = "H...."
320 A$(19) = "J.---"
```

```
330 A$(20) = "L.-.."
340 A$(21) = "P.--."
350 A$(22) = "Q--.-"
360 A$(23) = "V...-"
370 A$(24) = "X-..-"
380 A$(25) = "Y-.--"
390 A$(26) = "Z--.."
400 REM QUINTUPLE
410 A$(27) = "0-----"
420 A$(28) = "1.----"
430 A$(29) = "2..---"
440 A$(30) = "3...--"
450 A$(31) = "4....-"
460 A$(32) = "5....."
470 A$(33) = "6-...."
480 A$(34) = "7--..."
490 A$(35) = "8---.."
500 A$(36) = "9----."
510 A$(37) = "/-..-." ' DN
520 A$(38) = "=-...-" ' BT
530 A$(39) = "a.-.-." ' AR
540 REM SEXTUPLE
550 A$(40) = "..-.-.-"
560 A$(41) = ",--..--"
570 A$(42) = "?..--.."
580 A$(43) = "s...-.-" ' SK
590 REM SPECIAL (NOT ON GENERAL TEST)
600 A$(44) = "~.-...-" ' NEW LINE
610 REM START OF CODE TRAINER PROGRAM
620 CLS
630 M5 = 20 ' BASIC SPEED CONSTANT = MAX WPM, BASICA=13 BASIC=15 BASCOM=20
640 F = 837 ' TONE FREQ. IN HZ. FCC SAYS 700 TO 1000 HZ.
650 PRINT "KH6FHN CODE SENDER, MODIFIED BY N6MPP 1985"
660 PRINT "ENTER T FOR TABLE, M FOR MEMORY TEST, P FOR PRACTICE";
670 INPUT S$
680 IF (S$ = "P") OR (S$ = "P") GOTO 930
690 IF (S$ = "M") OR (S$ = "m") GOTO 1820
700 PRINT
710 PRINT "A .- S ... . .-.-.-"
720 PRINT "B -... T . , --..--"
730 PRINT "C -.-. U ..- ? ..--.."
740 PRINT "D -. . V ...- / -..-. (DN)"
750 PRINT "E . W .-- = -...- (BT = DOUBLE DASH)"
760 PRINT "F ..-. X -..- a .-.-. (AR = END OF MESSAGE)"
770 PRINT "G --. Y -.-- s ...-.- (SK = END OF CONTACT)"
780 PRINT "H .... Z --.. ~ .-...- (NEW LINE)"
790 PRINT "I .. 0 -----"
800 PRINT "J .--- 1 .----"
810 PRINT "K -.- 2 ..---"
820 PRINT "L .-.. 3 ...--"
```

```
830 PRINT "M -- 4 ....-"
840 PRINT "N -. 5 ....."
850 PRINT "O --- 6 -...."
860 PRINT "P .--. 7 --..."
870 PRINT "Q --.- 8 ---.."
880 PRINT "R .-. 9 ----."
890 PRINT
900 PRINT "(PRESS ANY KEY TO CONTINUE)"
910 IF INKEY$ = "" THEN 910
920 GOTO 610
930 REM PRACTICE
940 PRINT USING "ENTER DESIRED CODE SPEED 5-##";M5;
950 INPUT T1
960 IF T1 < 5 THEN 930
970 IF T1 > M5 THEN 930
980 T = M5 / T1
990 IF T1 <= 12 THEN T = M5 / (T1 - 1)
1000 IF T1 <= 11 THEN T = M5 / (T1 - 2)
1010 IF T1 <= 9 THEN T = M5 / (T1 - 3)
1020 T13 = T
1030 IF T1 < 13 THEN T13 = M5 / 13
1040 REM HERE WE CAN ALSO ENTER TONE FREQ. F (HZ)
1050 PRINT "ENTER K TO SEND FROM KBD, F TO SEND A FILE, R FOR RANDOM";
1060 INPUT S$
1070 IF (S$ = "K") OR (S$ = "k") THEN GOSUB 1460
1080 IF (S$ = "F") OR (S$ = "f") THEN GOSUB 1110
1090 IF (S$ = "R") OR (S$ ="r") THEN GOSUB 1530
1100 GOTO 620
1110 REM FILE SEND
1120 PRINT "ENTER THE FILE TO SEND";
1130 INPUT DSNAME$
1140 OPEN DSNAME$ FOR INPUT AS 1
1142 PRINT "(PRESS ANY KEY WHEN READY)"
1143 T = 1.4*T ' MORE FUDGE
1144 GOSUB 2190 : T0 = O ' TIME IN SECONDS
1146 S = 0
1148 IF INKEY$ = "" THEN 1144
1150 IF EOF(1) THEN 1250
1160 LINE INPUT # 1, REC$
1170 LL = LEN(REC$)
1180 FOR L1 = 1 TO LL
1190 C$ = MID$(REC$, L1, 1)
1195 S = S + 1 : IF C$ > "Z" THEN S = S + 1
1200 GOSUB 1270 ' GEN MORSE
1210 NEXT L1
1220 C$ = " " : GOSUB 1270
1230 PRINT
1240 GOTO 1150
1250 CLOSE # 1 : PRINT
1252 GOSUB 2190 : O = O - T0
```

```
1255 PRINT USING "ACTUAL WPM BY FCC STANDARDS = ##.#";(S/O)*12
1257 PRINT "(PRESS ANY KEY TO CONTINUE)"
1258 IF INKEY$ = "" THEN 1258
1260 RETURN ' FILE LIST
1270 REM GENERATE MORSE FOR CHARACTER C$ AT RATE T.
1280 FOR J = 1 TO HBNDA
1290 IF MID$(A$(J), 1, 1) = C$ THEN GOSUB 1360 ' MAKE SOUND
1300 NEXT J
1310 IF F = 838 THEN RETURN
1320 IF C$ = " " THEN SOUND 32767, T*4
1330 IF C$ = "~" THEN PRINT " "
1340 IF C$ <> "~" THEN PRINT C$;
1350 RETURN ' END GENERATE MORSE
1360 REM MAKE SOUND
1370 K = LEN(A$(J))
1380 FOR L = 2 TO K
1390 SL = 1
1400 IF MID$(A$(J), L, 1) = "-" THEN SL = 3
1410 SOUND F, T13*SL
1420 SOUND 32767, T13 ' SPACE
1430 NEXT L
1440 SOUND 32767,3*T-T13
1450 RETURN
1460 REM KEYBOARD
1470 PRINT "ENTER * TO END KEYBOARD MODE"
1480 C$ = INKEY$
1490 IF C$ = "" THEN 1480
1500 IF C$ = "*" THEN RETURN
1510 GOSUB 1270
1520 GOTO 1480
1530 REM RANDOM
1540 PRINT "TEST WILL LAST 5 MINUTES"
1550 PRINT "STRIKE ANY KEY WHEN READY"
1560 PRINT
1570 T0=RND : IF INKEY$ = "" THEN 1570
1580 GOSUB 2190 : T0 = O ' TIME IN SECONDS
1590 S = 0 : S0 = 0
1600 Z = 7
1610 GOSUB 2110
1620 I = 0
1630 C$ = INKEY$
1640 IF C$ <> "" THEN 1780
1650 GOSUB 2190 : IF O > T0+300 THEN 1760
1660 I = I + 1
1670 C$ = " "
1680 IF I = INT(I/6)*6 THEN 1730 ' GROUPS OF FIVE
1690 K = INT(RND*Z1)+1
1700 IF K>26 THEN IF VAL(MID$(TIME$,7,2))<15 THEN K = INT(RND*26)+1
1710 C$ = MID$(A$(K), 1, 1)
1720 S0 = S0 + 1 : S = S + 1 : IF K > 26 THEN S = S + 1
```

```
1730 GOSUB 1270 ' TOOT TOOT!
1740 IF I = INT(I/24)*24 THEN PRINT ' FOUR GROUPS
1750 GOTO 1630
1760 PRINT : IF I <> INT(I/24)*24 THEN PRINT
1770 PRINT USING "### CHARS AT ACTUAL WPM BY FCC STANDARDS OF ##.#";S0,S/25
1780 PRINT "(PRESS ANY KEY TO CONTINUE)"
1790 C$ = INKEY$
1800 IF C$ = "" THEN 1790
1810 RETURN
1820 REM MEMORY TEST
1830 T1=13 ' WPM
1840 T=M5/T1
1850 T13=T
1860 F = 838
1870 Z=4 ' INITIAL MAX LENGTH OF SYMBOLS
1880 S=0
1890 FOR J9=1 TO 10
1900 E=0
1910 GOSUB 2110
1920 FOR I=1 TO 10
1930 K9 = INT(RND*Z1)+1
1940 B$ = A$(K9)
1950 C$ = MID$(B$, 1, 1)
1960 GOSUB 1270
1970 PRINT USING "### : ";10*(J9-1)+I;
1980 S$ = INKEY$ : IF S$ = "" THEN 1980
1990 PRINT S$;
2000 IF S$=C$ THEN S=S+1 : PRINT " RIGHT!"
2010 IF S$<>C$ THEN E=E+1 : PRINT " WRONG, IT'S ",B$
2020 NEXT I
2030 IF E=0 THEN Z=Z+1
2040 IF Z>6 THEN Z=6
2050 IF E>1 THEN Z=Z-1
2060 NEXT J9
2070 PRINT "YOUR SCORE WAS ",S
2080 PRINT "(PRESS ANY KEY TO CONTINUE)"
2090 IF INKEY$ = "" THEN 2090
2100 GOTO 610
2110 REM SUBR TO GET MAX CHAR LEN --- Z1
2120 IF Z>= 6 THEN Z1 = 43
2130 IF Z = 5 THEN Z1 = 39
2140 IF Z = 4 THEN Z1 = 26
2150 IF Z = 3 THEN Z1 = 14
2160 IF Z = 2 THEN Z1 = 6
2170 IF Z<= 1 THEN Z1 = 2
2180 RETURN
2190 REM TIMER SUBROUTINE
2200 X$=TIME$
2210 O1$=MID$(X$,1,2)
2220 O2$=MID$(X$,4,2)
```

```
2230 O3$=MID$(X$,7,2)
2240 O=VAL(O1$)*3600+VAL(O2$)*60+VAL(O3$)
2250 RETURN
2260 END
```

--
bill davidsen (wedu@ge-crd.arpa)
{uunet | philabs | seismo}!steinmetz!crdos1!davidsen
"Stupidity, like virtue, is its own reward" -me

35. Convert your cordless telephone to 800 MHz

Newsgroup: rec.ham-radio
Date: 1988-01-31 02:53:25 UTC
From: parnass@ihuxz.ATT.COM
Message-ID: <2585@ihuxz.ATT.COM>
Source record: 19874
Cross-posted to: rec.ham-radio,sci.electronics

x
CONVERT YOUR CORDLESS TELEPHONE TO 800 MHZ?

by Bob Parnass, AJ9S

Convert your cordless telephone to receive 800 MHz? Yes,
I'm quite serious.

How do you convert a 47 MHz cordless phone to 800 MHz?
With a converter, of course!

But you don't need a fancy $99 Hamtronics converter. All
you need is the UHF tuner from a spare television set
that was manufactured when TVs still covered channels
14-83. I used the solid state, tuneable UHF tuner from a
cheapie JVC television set given me a few years ago.

This tuner seems typical of the type available in TVs for
the past several years. It uses a variable capacitor,
not a varicap diode, to tune channels 14-83 (470-890
MHz), and convert them to an IF of 47 MHz. If 47 MHz
sounds familiar, that's because it is the upper edge of
the cordless telephone band. A cordless telephone is
just a full duplex 46-47 MHz FM receiver and 49-50 MHz FM
transmitter in the same case.

Since I don't own a cordless phone, I used a scanner
tuned to 47 MHz and connected its antenna jack to the IF
output of the TV tuner. My tuner required a 300 ohm
impedance antenna, so I placed an ordinary TV balun
between the tuner input and my scanner antenna.

The IF is pretty broad - at least 10 MHz, so I tune
around on my scanner, rather than use the very coarse
tuning control on the tuner itself.

This tuner lacks an RF amplifier, so it's not as sensi-
tive as a modern 800 MHz scanner, but I sure hear a lot
of stations between 460 and about 890 MHz!

My tuner works well when powered at 6-9 VDC, and since it
only draws about 10 milliamps, I use a 9 volt alkaline
battery. An article in January 1988 Ham Radio Magazine
describes other TV tuners, and suggests ways to put them
to good use.

WARNING: Listening in on mobile phone conversations is
now against the law.
--
===-===
Bob Parnass, Bell Telephone Laboratories - ihnp4!ihuxz!parnass - (312)979-5414

36. Re: Convert your cordless telephone to 800 MHz

Newsgroup: rec.ham-radio
Date: 1988-01-31 18:11:23 UTC
From: ron@topaz.rutgers.edu
Message-ID: <17712@topaz.rutgers.edu>
Source record: 19875
Cross-posted to: rec.ham-radio,sci.electronics

WARNING: Listening in on mobile phone conversations is
now against the law.

So is telling people how to do it. Better watch out for the
phone cops.

-Ron

37. Re: Program to generate audible Morse code.

Newsgroup: rec.ham-radio
Date: 1988-02-02 13:19:51 UTC
From: jbh@mibte.UUCP
Message-ID: <2492@mibte.UUCP>
Source record: 19876
Cross-posted to: comp.binaries.ibm.pc,comp.sys.cbm,comp.sys.ibm.pc,rec.ham-radio

In article <3049@voder.UUCP>, kev@voder.UUCP writes:
>
> I am looking for programs that will generate audible Morse code through a
> computer's sound generation facilities. I would appreciate programs for both
> a Commodore 64 and an IBM XT clone. The main features that I am looking for
> are the ability to vary the speed that each individual letter is sent and the
> time between each character; i.e., send a letter's code, at say, 15 words per
> minute but have each individual letter sent at 5 wpm. If the program can
> generate random characters or convert a text file to code are also very useful.
>
Dennis Green, KB8CS has an article on this in the January '88 Ham
Radio magazine. He offers a C64 program that does what you
require. I have a copy and it works quite well with
independantly variable character speed and spacing, random code
generation and the ability to store and retrieve text from disk.

You can get a copy of the listing from Ham Radio for a SASE (44
cents), but the program is quite long to type in. Dennis has
arranged for another Detroit ham, Robert Evans N8GFE, 23540
Manistee, Oak Park, Mich. 48237 to dupicate the disk. Send Eight
bucks and he will mail you a copy.

--

Jim Harvey | "Ask not for whom the bell
Michigan Bell Telephone | tolls and you will only pay
29777 Telegraph | Station-to-Station rates."
Southfield, Mich. 48034 |

ihnp4!mibte!jbh or try ulysses!gamma!mibte!jbh

38. Re: Use a VLF rcvr to decode TV's secondary audio programming

Newsgroup: rec.ham-radio
Date: 1988-02-09 05:57:19 UTC
From: Oliver@cup.portal.com
Message-ID: <3054@cup.portal.com>
Source record: 19877
Cross-posted to: rec.ham-radio,sci.electronics

There is another subcarrier above the SAP called the professional channel....This is used to communicate data and voice to and from field units withen the range of there transmition range.

Don't know the frequency right off...but if you want more info mail me and I'll bet fer ya!

39. Re: build-it-yourself EPROM erasers

Newsgroup: rec.ham-radio
Date: 1988-02-09 17:42:55 UTC
From: brian@ucsd.EDU
Message-ID: <12@ucsd.EDU>
Source record: 19878
Cross-posted to: rec.ham-radio,sci.electronics

Easy to do. Go to a LARGE industrial electrical, restaurant, laundry, or hospital/sickroom supply house and buy an ultraviolet GERMICIDAL LAMP. This will be a small clear fluorescent-style lamp tube. They are typically available in either 15 or 25 watt sizes.

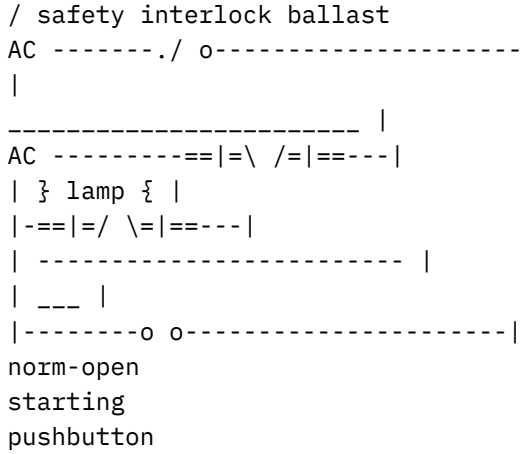
You will also need the two SOCKETS that it mounts in, and the BALLAST that must be wired in series with it, a starting pushbutton (any normally-open pushbutton rated for 115VAC will do fine - there's very little current here), and a safety interlock switch.

I haven't priced this stuff recently, but I'd guess that it's on the order of $20 or so.

Find a box that it will fit in that is OPAQUE and has an easily removable lid. I used an 8-track cartridge storage box from my local K-mart. Install the lamp, sockets, ballast, an AC mains power cord, and for safety, a switch which disconnects power when you open the lid. See the crude circuit below.

Put some conductive foam in the bottom of the box so you can put the EPROMS into the foam within a few inches of the lamp. It should erase the bits in about 1/2 hour exposure to the ultraviolet light the germicidal lamp gives out.

Be careful. Don't fry your eyes, and be sure to insulate everything well so you don't zap yourself.
- Brian



40. Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-10 00:32:56 UTC
From: john@anasaz.UUCP
Message-ID: <602@anasaz.UUCP>
Source record: 19879
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

Here in Paradise Valley, Arizona, we have the dubious distinction of being the only place in the US where speeding tickets are given by mail after an automatic device snaps your picture and speed! About 10 days after the alleged offense, you get a speeding ticket in the mail. I find this pretty offensive, since I can't remember everywhere I go and how fast 10 days later. It has raised a lot of controversy (not to mention money for the town) since it has been installed, but so far has not been beaten in court.

Today, I spotted this beast. I drove by and noticed that my radar detector didn't respond to it. The person running the device said that it operates on Ka band (34 gHz). Most radar detectors only operate on X (10 gHz) and Ku (24 gHz) bands. Also, he said that it only runs 1/2 milliwatt of power, making it detectable for about 1 second if you can receive Ka band. Finally, it will in the future use a laser, making it totally undetectable with microwave radar detectors.

So.... If this thing continues to hold up in court, you could be next! Big brother is watching and taking your picture. Good Luck!

P.S. It hasn't got me yet (I hope)! I don't speed in PV anyhow.
--
John Moore (NJ7E) hao!noao!mcdsun!nud!anasaz!john
(602) 870-3330 (day or evening)
The opinions expressed here are obviously not mine, so they must be someone else's.

41. Re: build-it-yourself EPROM erasers

Newsgroup: rec.ham-radio
Date: 1988-02-10 02:59:39 UTC
From: bobc%wings@Sun.COM
Message-ID: <41487@sun.uucp>
Source record: 19880
Cross-posted to: rec.ham-radio,sci.electronics

In article <12@ucsd.EDU> brian@ucsd.edu (Brian Kantor) writes:
>Easy to do. Go to a LARGE industrial electrical, restaurant,
>laundry, or hospital/sickroom supply house and buy an ultraviolet
>GERMICIDAL LAMP. This will be a small clear fluorescent-style lamp
>tube. They are typically available in either 15 or 25 watt sizes.
>

All good stuff, especially the interlock. UV is dangerous - please
exercise a great deal of caution.

A few details:
Most EPROMs have a sensititity to a specific wavelength,
e.g. 253.7 nanometers for the TI TMS2732A.

Erase time is a function of total exposure dose, which is
the product of the intensity * time. To quote from TI
(I just grabbed the TMS2732A spec at random):

"The recommended minimum exposure dose (UV intensity x exposure
time) is fifteen watt-seconds per square centimeter."

The exposure time will vary from device type to device type.

Bob Clark
Sun Microsystems

42. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-10 16:58:18 UTC
From: kevinr@tandem.UUCP
Message-ID: <342@tandem.UUCP>
Source record: 19881
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <602@anasaz.UUCP>, john@anasaz.UUCP (John Moore) writes:
> Here in Paradise Valley, Arizona, we have the dubious distinction of
> being the only place in the US where speeding tickets are given by
> mail after an automatic device snaps your picture and speed!
>
> that it operates on Ka band (34 gHz). Most radar detectors only

Quite correct.
>
> So.... If this thing continues to hold up in court, you could be

It has not held up much in CA! Speed Capital of the West.

The CHP has had a hard time prosecuting the tickets in Northern
CA. Basically, the evidence submitted is circumstantial.

A quick fix is to install a slave strobe under your hood. When
the ROBOCOP flashes, you flash! If your wattage is high enough,
and your circuits fast enough, the picture won't be quite as
good.

Kevin Rowett
.....ihnp4!ptsfa!pacbell!tandem
N6RCE

43. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-10 19:52:16 UTC
From: robert@sri-spam.istc.sri.com
Message-ID: <11407@sri-spam.istc.sri.com>
Source record: 19882
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <602@anasaz.UUCP> john@tower.UUCP (John Moore) writes:
+Here in Paradise Valley, Arizona, we have the dubious distinction of
+being the only place in the US where speeding tickets are given by
+mail after an automatic device snaps your picture and speed! About 10
+days after the alleged offense, you get a speeding ticket in the mail.
+I find this pretty offensive, since I can't remember everywhere I go
+and how fast 10 days later. It has raised a lot of controversy (not
+to mention money for the town) since it has been installed, but so
+far has not been beaten in court.
+
+Today, I spotted this beast. I drove by and noticed that my radar
+detector didn't respond to it. The person running the device said
+that it operates on Ka band (34 gHz). Most radar detectors only
+operate on X (10 gHz) and Ku (24 gHz) bands. Also, he said that it
+only runs 1/2 milliwatt of power, making it detectable for about
+1 second if you can receive Ka band. Finally, it will in the future
+use a laser, making it totally undetectable with microwave radar
+detectors.

Lasers huh? Well, there are ways to fight this. Blinding
the sensor with another stationary laser is one way, emitting
a laser when pulsed would be another would be difficult, but
maybe possible with a wide spread laser. However, I think the
best solution would be the use of a laser targeting system
on a large caliber long range weapons, such as a .300 Winchester
magnum. That should tend to inhibit Big Brother....
--

Robert Allen, robert@spam.istc.sri.com
415-859-2143 (work phone, days)
---

44. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-10 20:54:32 UTC
From: welty@sunbarney.steinmetz
Message-ID: <9504@steinmetz.steinmetz.UUCP>
Source record: 19883
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <602@anasaz.UUCP> john@tower.UUCP (John Moore) writes:
> about the new automagic ticket generators ...

That sounds pretty accurate, given the reporting I've heard so far.
I have heard one report that some civic minded souls have discovered
that the ticket machine can be dealt with easily with a can of spray
paint. I find this amusing, although I'd never actually recommend
destruction of public property ...

Richard Welty Phone H: 518-237-6307 W: 518-387-6346
{rochester,philabs,uunet}!steinmetz!welty
welty@ge-crd.ARPA
``join the auto-sports mailing list -- it's easy and it's fun''

45. Re: build-it-yourself EPROM erasers

Newsgroup: rec.ham-radio
Date: 1988-02-10 22:15:52 UTC
From: spike@bu-cs.BU.EDU
Message-ID: <19822@bu-cs.BU.EDU>
Source record: 19884
Cross-posted to: rec.ham-radio,sci.electronics

In article <12@ucsd.EDU> brian@ucsd.edu (Brian Kantor) writes:
>
>Find a box that it will fit in that is OPAQUE and has an easily
>removable lid. I used an 8-track cartridge storage box from my local
>K-mart.

We found that a bread pan worked well. The light was mounted
in the pan and this was placed over a board with two pegs in it that
matched two holes in the handles of the pan.

```
----------------------------------------
/ \ <------Bread Pan
/ \
/ \
[] / \ [] <----Peg
===[]==/ \==[]===
[][][][][][][][][][][][][][][][][][][][][][][][][][][][][][][][][][][] <-- Board
[][][][][][][][][][][][][][][][][][][][][][][][][][][][][][][][][][][]
```

>Be careful. Don't fry your eyes, and be sure to insulate everything
>well so you don't zap yourself.
> - Brian

"Last night I had that dream again. I dreamt I had to take a
test, in a Dairy Queen, on another planet."
UUCP: ...!harvard!bu-cs!bu-it!spike ARPANET: spike@bu-it.bu.edu
CSNET: spike@bu-it BITNET: engemnc@bostonu "VPS sucks"

--
->Spike

46. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-10 23:31:39 UTC
From: todd@uop.edu
Message-ID: <1060@uop.edu>
Source record: 19885
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

You would be amazed what a good rifle could do to that device.

;-)
---
uop!todd@uunet.uu.net
cogent!uop!todd@lll-winken.arpa
{backbone}!ucbvax!ucdavis!uop!todd

47. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-11 05:37:17 UTC
From: jbn@glacier.STANFORD.EDU
Message-ID: <17308@glacier.STANFORD.EDU>
Source record: 19886
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

Gadgets like this, although rare in the US, have been around for
years in Germany and Japan. But the radar/lidar approach really ought
to be replaced with a motion vision system which matched the images
from frame to frame and measured speed in that way. The major problem
is that television resolution isn't good enough to read a licence plate
given a field of view that covers an entire road. But once HDTV cameras
become generally available, this problem should go away. Even without
HDTV technology, it may be possible to make this work, although it will
probably take one camera per lane.

The major advantage of the video approach is that misidentification of the
vehicle can be much reduced, if not eliminated. With a videotape as a
check, there's an objective but human-checkable record to be examined in
court when necessary. This should make it a lot harder to be
falsely identified as the speeding car, while making it much easier to
get convictions in court.

Digesting the data at TV rates is hard, but not impossible.
Signal processing chips that can convolve images in real-time are starting
to become widely available. (Any DSP5600 users out there, by the way?)
Note that the only exposed component of the system is the camera, and
cameras are not only cheap, but tiny. (Pulnix has some very nice
cameras about 1" x 1" x4"; these are becoming popular with the robotics
people, especially when you want a camera near the end of an arm.)

There could be a nice product opportunity here for someone.

John Nagle

48. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-11 14:08:53 UTC
From: john@anasaz.UUCP
Message-ID: <610@anasaz.UUCP>
Source record: 19893
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <342@tandem.UUCP> kevinr@tandem.UUCP (Kevin J. Rowett) writes:
>In article <602@anasaz.UUCP>, john@anasaz.UUCP (John Moore) writes:
>> Here in Paradise Valley, Arizona, we have the dubious distinction of
>> being the only place in the US where speeding tickets are given by
>> mail after an automatic device snaps your picture and speed!

>A quick fix is to install a slave strobe under your hood. When
>the ROBOCOP flashes, you flash! If your wattage is high enough,
>and your circuits fast enough, the picture won't be quite as
>good.

Clever idea! Unfortunately, this machine is accompanied by both
a technician and a policeman, and it might result in one
being chased and then charged with something nasty like
obstruction of justice (anyone know if they can do this?).
How about a near infrared emitter which will fog the film
but be invisible to the operators? I don't know enough
about the spectral response of the film, but there might
be something that would work.

--
John Moore (NJ7E) hao!noao!mcdsun!nud!anasaz!john
(602) 870-3330 (day or evening)
The opinions expressed here are obviously not mine, so they must be
someone else's.

49. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-11 14:51:08 UTC
From: gwu@clyde.ATT.COM
Message-ID: <21649@clyde.ATT.COM>
Source record: 19888
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <602@anasaz.UUCP> john@tower.UUCP (John Moore) writes:
>Today, I spotted this beast. I drove by and noticed that my radar
>detector didn't respond to it. The person running the device said
>that it operates on Ka band (34 gHz). Most radar detectors only
>operate on X (10 gHz) and Ku (24 gHz) bands. Also, he said that it
>only runs 1/2 milliwatt of power, making it detectable for about
>1 second if you can receive Ka band. Finally, it will in the future
>use a laser, making it totally undetectable with microwave radar
>detectors.

First off, unless you really think any followups have any bearing
on sci.electronics, please remove it from the groups.

Anyways, the latest ad for BEL detectors claims to detect all Ka
as well as X and K (Ku) bands. Of course, at 0.5 mw of power, it may very
well be hard to detect. As for the laser, does anyone have any ideas on
commercializing stealth technology?

George J Wu
rutgers!clyde!gwu

50. Re: build-it-yourself EPROM erasers

Newsgroup: rec.ham-radio
Date: 1988-02-11 15:04:23 UTC
From: gwu@clyde.ATT.COM
Message-ID: <21651@clyde.ATT.COM>
Source record: 19889
Cross-posted to: rec.ham-radio,sci.electronics

A shown in an earlier post, a pretty inexpensive and cheap UV eraser can be built. But why not use a huge piece of expensive equipment; commonly referred to as an oven. It can double to roast your Thanksgiving turkey, and lots more.

Anyways, the reasoning goes something like this: the UV light is just some extra energy you're giving to release trapped electrons. So why not use some other form of energy, like heat?

This has actually been successfully done, although I can't remember the temperature or time. I think it was half an hour at 300 degrees. Start at a low temperature and work up to it by trial and error. One extra note, this works only for ceramic packages. Plastic ones would probably melt and be difficult to plug back into the sockets.

George J Wu
rutgers!clyde!gwu

51. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-11 15:54:23 UTC
From: karn@thumper.bellcore.com
Message-ID: <943@thumper.bellcore.com>
Source record: 19890
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

> ... the ticket machine can be dealt with easily with a can of spray
> paint.

Spray paint? Rifle bullets? Nah...too brute-force. Assuming that the radar works on the conventional CW Doppler principle, there is a much more elegant way.

Just set up a small electric fan with metal blades in front of the device. If the blades are properly shaped (or re-shaped) and the fan turns at the right speed, the radar unit should be fooled into thinking it's seeing a speeder. Just leave the unit on long enough for the ticket machine to expend all of its film.

Don't stand in front of the camera while you're doing this...

Phil

52. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-11 16:17:22 UTC
From: ron@topaz.rutgers.edu
Message-ID: <17983@topaz.rutgers.edu>
Source record: 19891
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

Gee around here I know a few people that would love to have such
a device for their private collections. Seems to me that they
had better be welded down pretty well.

-Ron

53. Re: build-it-yourself EPROM erasers

Newsgroup: rec.ham-radio
Date: 1988-02-11 16:51:33 UTC
From: dbraun@cadev4.intel.com
Message-ID: <1692@mipos3.intel.com>
Source record: 19887
Cross-posted to: rec.ham-radio,sci.electronics

In article <41487@sun.uucp> bobc@sun.UUCP (Bob Clark) writes:
>In article <12@ucsd.EDU> brian@ucsd.edu (Brian Kantor) writes:
>>Easy to do. Go to a LARGE industrial electrical, restaurant,
>>laundry, or hospital/sickroom supply house and buy an ultraviolet
>>GERMICIDAL LAMP. This will be a small clear fluorescent-style lamp
>>tube. They are typically available in either 15 or 25 watt sizes.
>>

An even better idea: Go to Goodwill or Salvation Army, or a garage
sale, and buy one of those old, cheap suntan lamps. These usually
have a bulb about 1 1/2" long. Just mount the chips 2-3" in front
of the bulb, and run it for 1/2 hour. This has worked fine for years
for me. These suckers are BRIGHT. I put it in the bathroom, and close
the door until it is done. Don't look at the lamp without goggles.
The lamps also give off lots of heat, so you might want to make a little
aluminum-foil shield, with holes in front of the EPROM windows.

Total cost: ~$3.00

While you wait, you can get a tan! (actually, these cheap lamps
are very bad for you. The UV is not filtered at all)

Doug Braun Intel Corp CAD
408 496-5939

/ decwrl \
| hplabs |
-| oliveb |- !intelca!mipos3!cadev4!dbraun
| amd |
\ qantel /

54. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-11 18:56:34 UTC
From: todd@uop.edu
Message-ID: <1064@uop.edu>
Source record: 19892
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

or just take off your front license plate...

keep it in the trunk with a lame excuse to a cop that you had intended
to go get some new screws to mount it..

you can speed, they can take your picture, but so what??

55. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-12 00:01:32 UTC
From: madd@bu-cs.BU.EDU
Message-ID: <19869@bu-cs.BU.EDU>
Source record: 19894
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <610@anasaz.UUCP> john@anasaz.UUCP (John Moore) writes:
>In article <342@tandem.UUCP> kevinr@tandem.UUCP (Kevin J. Rowett) writes:
>>In article <602@anasaz.UUCP>, john@anasaz.UUCP (John Moore) writes:
>>> [...] speeding tickets are given by
>>> mail after an automatic device snaps your picture and speed!
>
>>[...] install a slave strobe under your hood. When
>>the ROBOCOP flashes, you flash!
>
>Unfortunately, this machine is accompanied by both
>a technician and a policeman [...]
>How about a near infrared emitter which will fog the film
>but be invisible to the operators?

Why not go all out and make an X-ray projector? If you manage to make it tight-beam, you'll be able to completely blacken the film (probably even the whole roll, to the delight of everyone else that day). Of course, X-rays are sufficiently dangerous that you might hurt the operators if you go by them very often.

Come to think of it, a CO2 laser of sufficient power could do some pretty good damage, too, and is also invisible. But now we're getting into SDI-style defenses...

jim frost
madd@bu-it.bu.edu

56. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-12 06:31:50 UTC
From: matt@shorty.CS.WISC.EDU
Message-ID: <5228@spool.cs.wisc.edu>
Source record: 19895
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <602@anasaz.UUCP> john@tower.UUCP (John Moore) writes:
>Here in Paradise Valley, Arizona, we have the dubious distinction of
>being the only place in the US where speeding tickets are given by
>mail after an automatic device snaps your picture and speed! About 10

I've heard of this system in Europe (Germany?) and somebody told me that it became unpopular with government officials and other important people because the ticket and picture came in the mail while the guy was at work and his wife opened it and saw the picture of the car, plate, speed, husband, and *the other woman* in the car with him. I thought, "this guy is not gonna get the welcome he is expecting when he gets home."

Mad Matt Schaefer ...!{harvard,ihnp4,rutgers,ucbvax}!uwvax!matt
UW-Madison Computer Sciences Laboratory matt@cs.wisc.edu

57. Photo radar enforcement and machine vision

Newsgroup: rec.ham-radio
Date: 1988-02-12 13:51:34 UTC
From: ornitz@kodak.UUCP
Message-ID: <1128@kodak.UUCP>
Source record: 19896
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <17308@glacier.STANFORD.EDU> jbn@glacier.UUCP (John B. Nagle) writes:
>
> Gadgets like this, although rare in the US, have been around for
>years in Germany and Japan. But the radar/lidar approach really ought
>to be replaced with a motion vision system which matched the images
>from frame to frame and measured speed in that way. The major problem
>is that television resolution isn't good enough to read a licence plate
>given a field of view that covers an entire road. But once HDTV cameras
>become generally available, this problem should go away. Even without
>HDTV technology, it may be possible to make this work, although it will
>probably take one camera per lane.

A company in Knoxville, TN, [Perceptics] has a contract with the Federal government to provide machine vision systems that will read license plates. For the present, this is a low-speed application for reading plates at US borders. I think their field of view is rather large, but they are having problems with the different sizes of lettering found on typical license plates. High definition solid-state cameras are readily available, the Kodak Megaplus (? not sure about the name - different Kodak division) for example with 1024 x 1024 resolution. I hope these Perceptics systems are as reliable as the one we bought. ;-)
Barry


```
-----------------
| ___ ________ |
| | / / | | Dr. Barry L. Ornitz UUCP:...!rochester!kodak!ornitz
| | / / | | Eastman Kodak Company
| |< < K O D A K| | Eastman Chemicals Division Research Laboratories
| | \ \ | | P. O. Box 1972
| |__\ \________| | Kingsport, TN 37662 615/229-4904
| |
-----------------
```

58. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-12 19:00:06 UTC
From: mrapple@uop.edu
Message-ID: <1070@uop.edu>
Source record: 19897
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

The big problem is that Robocop won't know who is DRIVING the car.
In this country, moving violations go against the record of the
driver, not the owner of the car. So you can say, "Gee, Judge Wapner,
I was in a bar in Cincinati at that time. I don't know who was driving
my car..."

Nick Sayer | Packet Radio: N6QQQ @ WA6RDH | CMS: SYSOP@STOKTON%STOCKTON
uucp: ...!sdcsvax!ucbvax!ucdavis!uop!mrapple | Fido: 161/31
Disclaimer: You didn't REALLY believe that, did you?
cat flames > /dev/null

59. Re: build-it-yourself EPROM erasers

Newsgroup: rec.ham-radio
Date: 1988-02-12 19:58:36 UTC
From: koko@uthub.toronto.edu
Message-ID: <698@uthub.toronto.edu>
Source record: 19898
Cross-posted to: rec.ham-radio,sci.electronics

In article <21651@clyde.ATT.COM>, gwu@clyde.ATT.COM (George Wu) writes:
> ...
> Anyways, the reasoning goes something like this: the UV light is just
> some extra energy you're giving to release trapped electrons. So why not use
> some other form of energy, like heat?
>
> This has actually been successfully done, although I can't remember the
> temperature or time. I think it was half an hour at 300 degrees. ...

I would not want to try this, or at least not to often, since the heat may destroy the device. Components in the silicon wafer are formed during the manufacturing process by controlled diffusion of impurities into selected areas in the wafer. Further heating might cause further diffusion which would make these components gradually disappear.

Why else would all data sheets for silicon integrated circuits specify a maximum ambient temperature?

Another potential problem is cracking -- this might not even be visible -- because of non-uniform heating or cooling.

60. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-13 01:37:40 UTC
From: todd@uop.edu
Message-ID: <1071@uop.edu>
Source record: 19899
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <1070@uop.edu>, mrapple@uop.edu (Nick Sayer) writes:
>
> The big problem is that Robocop won't know who is DRIVING the car.

Yeah, the picture was your twin brother huh?

> In this country, moving violations go against the record of the
> driver, not the owner of the car. So you can say, "Gee, Judge Wapner,
> I was in a bar in Cincinati at that time. I don't know who was driving
> my car..."

Must be the *other* nick sayer in that picture!

> Nick Sayer | Packet Head: N6QQQ @ WA6QRM| CMS: SYSOP@STOKTON%STOCKTON
> uucp: ...!sdcsvax!ucbvax!ucdavis!uop!mrapple | Fido: 161/31
> Disclaimer: You didn't REALLY believe that, did you?

Nope!

> nick's head = /dev/null

61. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-13 02:37:15 UTC
From: reese@eeg.UUCP
Message-ID: <369@eeg.UUCP>
Source record: 19900
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <11407@sri-spam.istc.sri.com>, robert@sri-spam.istc.sri.com (Robert Allen) writes:
> ... However, I think the
> best solution would be the use of a laser targeting system
> on a large caliber long range weapons, such as a .300 Winchester
> magnum. That should tend to inhibit Big Brother....

good thing b.b. doesn't think the same way!
--
Reese E. Faucette, EEG Systems Laboratory
1855 Folsom St, San Francisco, Ca 94103 (415) 621-8343
{ihnp4,lll-crg,sun,qantel,pyramid}!ptsfa!eeg!reese -or-
reese@sim.berkeley.edu

62. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-13 21:22:15 UTC
From: welty@sunbarney.steinmetz
Message-ID: <9541@steinmetz.steinmetz.UUCP>
Source record: 19901
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <1070@uop.edu> mrapple@uop.edu (Nick Sayer) writes:

>The big problem is that Robocop won't know who is DRIVING the car.
>In this country, moving violations go against the record of the
>driver, not the owner of the car. So you can say, "Gee, Judge Wapner,
>I was in a bar in Cincinati at that time. I don't know who was driving
>my car..."

This proves to be alterable via local statute. Communities that are
trying out the robocop have altered their laws so that they may charge
the owner if said owner refuses to identify the driver at the time of
the infraction. I wonder if the owner gets any points from this ...

Richard Welty Phone H: 518-237-6307 W: 518-387-6346
{rochester,philabs,uunet}!steinmetz!welty
welty@ge-crd.ARPA
``join the auto-sports mailing list -- it's easy and it's fun''

63. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-14 07:11:05 UTC
From: sampson@killer.UUCP
Message-ID: <3304@killer.UUCP>
Source record: 19902
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

The radars are not left unattended (illegal in usa). The version I saw was in the back of a Blazer. Is anyone else working on a HARM missle for this thing... I understand the collection rate is almost 100% before trial. The pictures are excellent!

64. Re: build-it-yourself EPROM erasers

Newsgroup: rec.ham-radio
Date: 1988-02-15 06:59:05 UTC
From: andy@rbdc.UUCP
Message-ID: <202@rbdc.UUCP>
Source record: 19903
Cross-posted to: rec.ham-radio,sci.electronics

Take them to your dentist, and have him place them under his x-ray machine.
That'll erase them, and you don't even have to clean the lid. Or you could
ship them to your self in a box labeled "Bomb". :-) :-) :-)

Andy Pitts {gladys, bakerst}!rbdc!andy

65. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-15 15:28:08 UTC
From: maa@ssc-vax.UUCP
Message-ID: <982@ssc-bee.ssc-vax.UUCP>
Source record: 19904
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

If they use lasers for speed detections, they would have to meet
very VERY stringent laser safety standards. Aiming a laser at
a car with a driver in it could cause BLINDNESS to the poor
driver if VERY stringent controls are not adhered to. Laser light
is very dangerous if it is aimed directly into someone's eyes. No, I
dont think this will happen.

Also on the subject of automated speeding detectors, you guys have
forgotten something very important. Vandalism/sabotage. Remember, these
things are unmanned and at the mercy of those who hate them and what they
represent. A piece of duct tape over the camera lense arpiture would do
the job temporily or better still, a heavy pick up with a snowplow
on it . . . . .

66. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-15 21:57:58 UTC
From: moto@cad.Berkeley.EDU
Message-ID: <750@pasteur.Berkeley.Edu>
Source record: 19905
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

Not only are they trying robo-cops, there is a new law which reclasifies
most driving offenses as "civil" - what that means is that you are guilty
unless you can prove innocence! The "legalese" is that the officer is unbiased,
and his word is equal to yours, unless you have something to back you up.
The standard of guilt is 50/50!
BB is alive and well in AZ!

Mike
.

67. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-15 23:53:11 UTC
From: henry@utzoo.uucp
Message-ID: <1988Feb15.185315.8332@utzoo.uucp>
Source record: 19906
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

> ... it might result in one
> being chased and then charged with something nasty like
> obstruction of justice (anyone know if they can do this?).

Interfering with a police officer in the performance of his duties is
usually a serious offence. Almost anything you do to interfere with a
police radar setup would probably qualify, if detected.

> How about a near infrared emitter which will fog the film
> but be invisible to the operators? ...

Might work. Remember that "near infrared" is not entirely invisible if
it's bright; the eye's sensitivity tails off in the IR, but it doesn't
go immediately to zero. Some of the near-IR fiber-optic wavelengths are
visible, dimly, in a dark room. Your IR flash is going to have to be
pretty bright if it's going to mess up the picture seriously. It might
be better to try for localized effects in crucial areas like the license
plate. Near-IR markings, brightly lit in the near IR, might make it
impossible to read the number. I don't know offhand whether suitable
marking materials are available, though.
--
Those who do not understand Unix are | Henry Spencer @ U of Toronto Zoology
condemned to reinvent it, poorly. | {allegra,ihnp4,decvax,utai}!utzoo!henry

68. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-15 23:56:37 UTC
From: henry@utzoo.uucp
Message-ID: <1988Feb15.185645.8400@utzoo.uucp>
Source record: 19907
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

> This proves to be alterable via local statute. Communities that are
> trying out the robocop have altered their laws so that they may charge
> the owner if said owner refuses to identify the driver at the time of
> the infraction. I wonder if the owner gets any points from this ...

More significant, I wonder if it is legal, given the constitutional rules
about innocent-until-proven-guilty and self-incrimination. Getting it
struck down could be lengthy and expensive, mind you.
--
Those who do not understand Unix are | Henry Spencer @ U of Toronto Zoology
condemned to reinvent it, poorly. | {allegra,ihnp4,decvax,utai}!utzoo!henry

69. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-16 08:04:49 UTC
From: matthew@ucscb.UCSC.EDU
Message-ID: <1983@saturn.ucsc.edu>
Source record: 19908
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

The topic of license-free packet radio has been floating around for
some time. Several ideas have come and gone, including the 52-54 MHz
"reallocation" and the use of 49 MHz license free bands.

Why not class D CB (27 MHz)...

The power limit on this band is sufficient to set up a reasonable
packet network (i.e. doesn't require lots of close-together low-power nodes).

The radios are cheap (<$60) and come with simple speaker and microphone
connectors, suitable for connecting a comercially available TNC.

The bandwidth available is sufficient to support at least the 300 baud
HF modem standard, and almost certainly will also support the standard
VHF 1200 baud (202) standard.

The channels already exist and, even better, already sound as bad as
packet channels would to voice users.

Contrary to popular belief, packet WILL work on AM. In fact, it may
work better than voice on the same channel, because heterodynes
with existing carriers are usually NOT within the modem filter bandpass.

A reasonable license-free packet network seems to be needed, and,
setting it up on existing personal radio channels would alleviate
complaints from users of other spectrum space (such as amateurs)
that would otherwise be reallocated to provide for such a service.

The only restriction that currently exists is FCC Part 95.627
which states that:
d) Digital emmissions are not permitted in the GMRS or the CB radio service.
e) The transmission of data is prohibited in the Personal Radio Services.

I am interested in finding out what other opinions exist regarding
the expansion of CB to include digital packet radio. Certainly if
enough people are interested, the FCC can be persuaded to modify
these existing regulations.

Please indicate your opinion by posting, or by e-mail.

Thanks,
Matthew Kaufman
matthew@ucsck.ucsc.edu, ...!ucbvax!ucscc!ucsck!matthew

70. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-16 14:24:08 UTC
From: kludge@pyr.gatech.EDU
Message-ID: <5012@pyr.gatech.EDU>
Source record: 19909
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <1983@saturn.ucsc.edu> matthew@ucsck.ucsc.edu (Matthew Kaufman, KA6SQG) writes:
>The topic of license-free packet radio has been floating around for
>some time. Several ideas have come and gone, including the 52-54 MHz
>"reallocation" and the use of 49 MHz license free bands.
>Why not class D CB (27 MHz)...

I don't know just what the present status of the Class C frequencies
are, but they are definitely available for digital communication. I
don't know if this is limited to remote control applications or not,
but it might be possible to consider a packet radio installation as
a remote control device (hook it up to a BSR X-10, etc... :-)).

Scott Dorsey Kaptain_Kludge
SnailMail: ICS Programming Lab, Georgia Tech, Box 36681, Atlanta, Georgia 30332

"To converse at the distance of the Indes by means of sympathetic
contrivances may be as natural to future times as to us is a
literary correspondence." -- Joseph Glanvill, 1661

Internet: kludge@pyr.gatech.edu
uucp: ...!{decvax,hplabs,ihnp4,linus,rutgers,seismo}!gatech!gitpyr!kludge

71. Re: build-it-yourself EPROM erasers

Newsgroup: rec.ham-radio
Date: 1988-02-16 17:46:49 UTC
From: straka@ihlpf.ATT.COM
Message-ID: <3709@ihlpf.ATT.COM>
Source record: 19910
Cross-posted to: rec.ham-radio,sci.electronics

In article <41487@sun.uucp> bobc@sun.UUCP (Bob Clark) writes:
>In article <12@ucsd.EDU> brian@ucsd.edu (Brian Kantor) writes:
>A few details:
> Most EPROMs have a sensititity to a specific wavelength,
> e.g. 253.7 nanometers for the TI TMS2732A.

Not really true. 253.7 nanometers just happens to be the primary wavelength of the short-wave UV emitted by the typical lamps used for this application.

What this spec really means is that you can't use long-wave UV lamps (like black lights, or mercury-vapor sun lamps) to do the job. It also means that you can't put ordinary glass or plastic in the light path either. Only special materials, such as fused quartz or some boro-silicate glasses have the necessary transmissivity at that particular wavelength.

As for protection from light as to the erasing of your data, unless the EPROM is marginal, the danger from typical light sources is grossly exaggerated by most people. When I was MAKING EPROMS back about 10 years ago (w/ Nat'l Semi), once we put a THIN coating of polyimide on the chip as a contamination barrier. You could NEVER erase the data. Same thing with Nitride passivation.
--
Rich Straka ihnp4!ihlpf!straka

Advice for the day: "MSDOS - just say no."

72. Re: build-it-yourself EPROM erasers (Just the facts)

Newsgroup: rec.ham-radio
Date: 1988-02-16 19:05:36 UTC
From: straka@ihlpf.ATT.COM
Message-ID: <3711@ihlpf.ATT.COM>
Source record: 19911
Cross-posted to: rec.ham-radio,sci.electronics

In article <698@uthub.toronto.edu> koko@uthub.toronto.edu (M. Kokodyniak) writes:
>In article <21651@clyde.ATT.COM>, gwu@clyde.ATT.COM (George Wu) writes:
>> ...
>> Anyways, the reasoning goes something like this: the UV light is just
>> some extra energy you're giving to release trapped electrons. So why not use
>> some other form of energy, like heat?
>>
>> This has actually been successfully done, although I can't remember the
>> temperature or time. I think it was half an hour at 300 degrees. ...

WAIT A MINUTE!!! All of the above is WAY off base! Let's get back to physics!
****

Let me preface my remarks by stating that 10 years ago, my job was to provide test strategies and reliability for the first N-channel EPROMs, the 2708 and 2716. The chips have gotten better over the years, but the physics remains the same.

Summary: Heat alone won't do it. A combination of heat and short wave UV may or may not be significantly better than short wave UV alone.

The electrons are stuck up in a floating gate structure in the EPROM. To get them off, they have to "tunnel" across the bandgap represented by the oxide layer to the surrounding layer(s). There is a specific threshold energy that must be exceeded (which can vary as a result of processing parameters) in order to tunnel.

The number of electrons which can tunnel is based on the distribution of energy that the subject electrons posess. This is, of course, some sort of (probably) normal distribution given a base ambient temperature. Raising the temperature raises the proportion of electrons that exceed that tunneling threshold and can tunnel across the oxide barrier. The degree to which the device is sensitive to temperature is known as its activation energy, which is measured in units of electron volts. This activation energy is empirically determined, and typically is in the range of 0.7 to 0.8 ev. A very small change in activation energy has a tremendous effect on the acceleration factor, as the relationship is exponential with the ratio of the two temperatures (with regard to absolute zero). See some basic college physics (or chemistry?) text for more details. This phenomenon is basic, and not just related to EPROMs.

Manufacturers routinely subject EPROMs to long bakes at elevated temperatures (usually SUBSTANTIALLY higher than the above mentioned 300 degrees F) to ensure proper data retention of each individual part. The object is to simulate worst case high temperature operation for a number of years. Any

EPROM worth its salt (so to speak :-)) will in actuality last at least 10 times the standard 5-year specification. Good ones are quite bullet-proof.

The reason that short wave (and not long wave) UV light does the trick, whereas heat doesn't is that the UV adds quite a kick to those electrons, yes, enough to get them over that tunneling barrier. That is why long wave, which is of lower energy, doesn't work too well (if at all). It doesn't add enough energy to kick the electrons over the threshold. Heat might add a little bit, perhaps enough to make a bit of difference. I don't know.

Sorry for getting a little bit long, but the non-semiconductor-device-physics people need to get some solid information on this one.

PS:
>
>I would not want to try this, or at least not to often, since the heat may
>destroy the device. Components in the silicon wafer are formed during the
>manufacturing process by controlled diffusion of impurities into selected
>areas in the wafer. Further heating might cause further diffusion which
>would make these components gradually disappear.

Diffusion is not an issue below 900 degrees C. Alloying of the aliminum contacts into the silicon and shorting out junctions is an issue at anything above about 425-450 degrees C. If you have gold-aluminum junctions in the packaging, the temperatures get even lower (but most manufacturers have fixed this particular problem (purple plague)).
--
Rich Straka ihnp4!ihlpf!straka

Advice for the day: "MSDOS - just say no."

73. Re: build-it-yourself EPROM erasers

Newsgroup: rec.ham-radio
Date: 1988-02-16 20:27:37 UTC
From: artm@phred.UUCP
Message-ID: <2033@phred.UUCP>
Source record: 19912
Cross-posted to: rec.ham-radio,sci.electronics

In article <21651@clyde.ATT.COM> gwu@clyde.UUCP (George Wu) writes:
>
> A shown in an earlier post, a pretty inexpensive and cheap UV eraser
>can be built. But why not use a huge piece of expensive equipment; commonly
>referred to as an oven.
>
>
> This has actually been successfully done, although I can't remember the
>temperature or time. I think it was half an hour at 300 degrees.
>... Plastic ones would probably melt and be
>difficult to plug back into the sockets.
>
Not a very good idea.

Even if you use ceramic packages, this high a temperature will severely
weaken the wire bonds to the die pads. You might get a few devices that
still work, but you wouldn't have any idea for how long.

Better to buy a cheap sunlamp. OR...I wonder how many thousand of the little
critters would fit into a tanning bed. Get together with all your friends
and buy an hour session at the local electric beach....;-) ;-)

//
My employers only take responsibility for those of my opinions for which
I am paid.
//
Art Marriott
...uw-beaver!tikal!phred!artm

74. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-16 21:54:12 UTC
From: todd@uop.edu
Message-ID: <1083@uop.edu>
Source record: 19913
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

What about building an awacs-esque array that will pick up the
police radio's local oscillator (air ground and radar)??

This is *sci* electronics, maybe we could discuss the necessary theory?

+ uop!todd@uunet.uu.net +
+ cogent!uop!todd@lll-winken.arpa +
+ {backbone}!ucbvax!ucdavis!uop!todd +
---
alias /dev/null postmaster@nmtvax
;-)

75. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-17 05:40:26 UTC
From: bilbo@pnet02.cts.com
Message-ID: <2588@gryphon.CTS.COM>
Source record: 19914
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

Gee, you mean traffic may have to start slowing down or we risk getting a speeding ticket in the mail returning home from work or play? And when statistics start showing a drop in fatalities? Boy, it's going to be tuff. Like smokers giving up their habit. Do we all have a degree of "death wish"?

Isn't it exciting to read how to try and beat the law? No, not really - but this is just my personal insight and feeling. Thanks for letting me share it with you.

Bill

UUCP: {ihnp4!scgvaxd!cadovax rutgers!marque}!gryphon!pnet02!bilbo
INET: bilbo@pnet02.cts.com

76. Speech Synthesizer Info

Newsgroup: rec.ham-radio
Date: 1988-02-17 21:03:30 UTC
From: tedk@ihuxv.ATT.COM
Message-ID: <2459@ihuxv.ATT.COM>
Source record: 19915
Cross-posted to: comp.sys.ibm.pc,sci.electronics,rec.ham-radio

Review and Information on B.G Micro Text to Speech Board.
------ --- ----------- -- --------- ---- -- ------ ------

COMPUTALKER SPEECH SYNTHESIZER
----------- ------ -----------

from B.G. MICRO (214) 271-5546 (Dallas TX)

I purchased the B.G. MICRO Computalker board for $89.95.
I have it set-up in a "stand alone" type operation. I have
it proped-up between books on my book shelf. I built my
own +5,+12,-12 power supply that doubles as a book-end.
I use a "ribbon" modem cable to connect it to one
of several different computers.

This Board uses the General Instruments SPO256-AL2 and CTS256-AL2
chip set. I think that these are the same chips that Radio Shack
sells. These chips have been mentioned in several books on
voice synthesis.

The board uses one slot (for power only) and requires
one serial com port connection. The board can except ASCII TEXT
from any computer (or terminal) with RS-232 port. There is a
1700 byte input buffer with hardware handshake signals. The board
is shipped with a (PC) Demonstration Disk, documentation,
and Schematics. The board has a speaker and a RCA type phone
jack for external speakers.

The serial port on the board can be set to one of seven baud rates
up to 9600 baud. The Computalker begins speaking the TEXT after
it receives a CR (0x0d) character.

The TEXT to SPEECH program within the Computalker is limited
but "Okay". It has trouble with numerical speech. Everything
must be spelled out. Such as "$104" must be sent to the
Computalker as "1 hundred and 4 dollars".

The voice quality is good compared to most voice synthesizers.
It sounds a bit "nasal", and take some time to get use to.
It is best if there are spaces between words and
difficult to understand words are spelled "phonetically".
This take some experimenting.

I have material on phonetic speech with PHONEMES and material
on using/constructing ALLOPHONE speech with the
SPO256-AL2, but I haven't found a way to by-pass the

text to speech conversion program.

Ted G. Kekatos
backbone!ihnp4!ihuxv!tedk (312) 979-0804
AT&T Bell Laboratories, Indian Hill South, IX-1F-460
Naperville & Wheaton Roads - Naperville, Illinois. 60566 USA

77. Re: build-it-yourself EPROM erasers (Just the facts)

Newsgroup: rec.ham-radio
Date: 1988-02-17 21:25:59 UTC
From: przemek@gondor.cs.psu.edu
Message-ID: <3299@psuvax1.psu.edu>
Source record: 19916
Cross-posted to: rec.ham-radio,sci.electronics

This is written in response to the long and basically correct article
about the physics of the EPROM. It explained th phenomenon correctly, but
omitted the quantitative expression for the process: one expression is worth
1000 words :^)
The physics of this process is simply of a dynamically activated system:
the probability of the electron passing the barrier (and consequently
the current, and the time to discharge the gate) is proportioonal to

E-E
0 where e=2.7182818...
- ----- E - electron energy
kT k is Boltzman const
e T is temperature
E is activation energy
0

So: ypu can either raise the energy of the electrons (by bombarding with
UV light quanta) or raise the temperature. But you better raise it enough!
UV has energy of ~3eV. Room temp kT is 25 meV; or in other words you have to
raise temp to 120 * 300 K or 36000K to get the same discharge speed, if I got
my numbers right. This is impractical :^)
przemek@psuvaxg.bitnet
psuvax1!gondor!przemek

78. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-17 21:35:52 UTC
From: ccs016@deneb.ucdavis.edu
Message-ID: <1174@ucdavis.ucdavis.edu>
Source record: 19917
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <1983@saturn.ucsc.edu> matthew@ucsck.ucsc.edu (Matthew Kaufman, KA6SQG) writes:
>
>
>The only restriction that currently exists is FCC Part 95.627
>which states that:
>d) Digital emmissions are not permitted in the GMRS or the CB radio service.
>e) The transmission of data is prohibited in the Personal Radio Services.
>---
>I am interested in finding out what other opinions exist regarding
>the expansion of CB to include digital packet radio. Certainly if
>enough people are interested, the FCC can be persuaded to modify
>these existing regulations.
>
>Please indicate your opinion by posting, or by e-mail.
>
>Thanks,
>Matthew Kaufman
>matthew@ucsck.ucsc.edu, ...!ucbvax!ucscc!ucsck!matthew

I use CB extensively. I do not have my ticket yet, but do hope to in
the future. I would really like to see a packet allowed on 27 mhz.
I started a radio club awhile ago, we are very interested in packet, ham
and other radio aspects, however, the money and living conditions limit
most of the members from moving on. A license free packet operation would
for sure get more people started.

My vote is yes, and I can say that so is the vote of our radio club.

* Patrick Tully RFD1
* RADIO FREE DAVIS -- cheap radio operation
* {{seismo|ihnp4!}lll-crg|sdcsvax|{decvax!}ucbvax}!ucdavis!deneb!ccs016
* pstully@ucdavis BITNET

79. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-17 22:07:05 UTC
From: ccs016@deneb.ucdavis.edu
Message-ID: <1175@ucdavis.ucdavis.edu>
Source record: 19918
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <210@ritcv.UUCP> cep4478@ritcv.UUCP (PUT YOUR NAME HERE) writes:
>
>
>Now, a question: I was once told that the sunspot period relative to CB
>radios is about 40 years, and that we are now on the upside of the curve.
>I was told that this means in about 10 years the range we will get from
>C.B. will be at least quadruple what it is now. Is this true?
>
> Christopher E. Piggott

I've heard this too. I believe it is true. The peak should start
somewhere around 1991. This is also the time when California is suppose
to have another predicted drought. Which makes sense because the last
highest CB activity was from 1976 to 1978 and this was the years
when California had its drought. I know that the time interval from
the last skip activity to 1991 is not 40 years, but what was experienced in
1976 to 1978 was a shorter skip cycle. (~10 years) From my observations,
CB also experiences a smaller scip cycle around 23 days (around there)

The skip activity during 1976 - 1978 from what I've been told by people
was great, but made talking local impossible. The conditions during those
years made many people interested in CB, but also forced a lot of people
to stop using radios. So, I'm guessing that around 1991 the skip conditions
will be better on CB than 1976-1978, but they will also force many people
off the radio.

Presently on 27 mhz the skip is rolling in. This fits with the 23 day
summer type day cycle. (warm afternoons, lots of sun). It has been this
way for about 4 days. From Northern California people from the east coast are
easily heard in the morining through 5pm, then people from the southern
western states and Canada our heard, and at around 6:30 Hawaii and Australia
are heard for only about 30 to 40 minutes. And around 7:00 or 7:300 the
airwaves are dead.

This experimenting was done on Side band using a 3 beamed yagi, horizontal.

* Patrick Tully
* {{seismo|ihnp4!}lll-crg|sdcsvax|{decvax!}ucbvax}!ucdavis!pstully
* pstully@ucdavis BITNET

80. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-18 00:15:12 UTC
From: sorgatz@ttidca.TTI.COM
Message-ID: <1943@ttidca.TTI.COM>
Source record: 19919
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <1983@saturn.ucsc.edu> matthew@ucsck.ucsc.edu (Matthew Kaufman, KA6SQG) writes:
>
>The topic of license-free packet radio has been floating around for
>some time. Several ideas have come and gone, including the 52-54 MHz
>"reallocation" and the use of 49 MHz license free bands.
The 1st of which will happen on a cold day in HELL, the second is not a
useful option due to the range of the devices available and...
>Why not class D CB (27 MHz)...
..this suggestion, while it might seem reasonable is actually not. Some of
us have tried this and while it *does* work, the amount of hate 'n' discontent
it generates would not endear such packet users to the rest of the CB community!
>The power limit on this band is sufficient to set up a reasonable
>packet network (i.e. doesn't require lots of close-together low-power nodes).
The power "limits" are seldom enforced, and you will find that in metropolitian
areas like L.A. and such, seldom observed. I.E.-noone will hear you @ 5 w.
>The radios are cheap (<$60) and come with simple speaker and microphone
>connectors, suitable for connecting a comercially available TNC.
With good reason, the radios are not very selective and have little in the
way of sensitivity. FM would be better, but F3E is illegal on 11 meters.
>The bandwidth available is sufficient to support at least the 300 baud
>HF modem standard, and almost certainly will also support the standard
>VHF 1200 baud (202) standard.
1200 works fine on a clear channel, AM or SSB. On a crowded channel only
SSB will get your packets across without a very large number of retrys.
>The channels already exist and, even better, already sound as bad as
>packet channels would to voice users.
No comment.
>Contrary to popular belief, packet WILL work on AM. In fact, it may
>work better than voice on the same channel, because heterodynes
>with existing carriers are usually NOT within the modem filter bandpass.
Yes, it will work, but the hetrodynes cause retries, many retries.
>A reasonable license-free packet network seems to be needed, and,
>setting it up on existing personal radio channels would alleviate
>complaints from users of other spectrum space (such as amateurs)
>that would otherwise be reallocated to provide for such a service.
Oh phooey! Stop sniveling, and go study a little! The Novice ticket is
well within the reach of anyone who wants it. There are Amateur Radio Clubs
around that will bendover backwards to assist you in doing so.
>The only restriction that currently exists is FCC Part 95.627
>which states that:
>d) Digital emmissions are not permitted in the GMRS or the CB radio service.
>e) The transmission of data is prohibited in the Personal Radio Services.
And with good reason! Study packet a little closer and you will notice

that improperly used, packet can cause a tremendous amount of interference. The use of such equipment by completly untrained users would be difficult to actually justify on the International level. Everything the FCC does is fuel for those that participate at the WARC's..you're asking for blood.
>I am interested in finding out what other opinions exist regarding
>the expansion of CB to include digital packet radio. Certainly if

The Amateur community stands ready to welcome you and all others as fellow operators...anytime you are ready to get serious. The expansion of CB radio, is something the FCC will only laugh at. It's been proposed several times. Some of the proposals have included such things as:

A) Expansion of class D 11 meter CB from 27.405Mhz to 27.995. mixed modes.
B) 27.410-27.510 A3J voice, F3E voice 27.515-27.715 and AX25a Packet only from 27.720-27.995 using F2/3/E.
C) A new class of service, from 27.410-27.510, for AX25a Packet only, using F2/3E. (i.e. "CB Packet" but with a license!)

As an Amateur, I can tell you that the majority of such schemes will *NEVER* garner a shred of support from the Amateur ranks because of the attitude that exists on CB. Look at the hassle that SSB users get/give to/from the AM users. Better still is the use of the "funny freqs"...there must be 40-50 times a week in L.A. that someone figures that since they don't "hear" anyone using the region between 28.0 and 28.2, that it's ok for them to have a nice FM QSO with their Trucker-buddies on their 'Rangers'...number 1: Most of these jerks don't know the difference between CW and fly-to-the-moon. The fact that some of us are indeed having a CW-QSO on 28.150 (right where they fire-up!) is of no interest to them, after all, they bought the radio! It *CAME* with the frequencies! Therefore... number 2: The number of existing radios that are equipped with A.M.-only...bad news is most CB users hate SSB, because they dont have it..more 'Low-buck mentality'. I would favor Frequency expansion (ala item B) if:

1) the radios were equipped in such a way that no firther expansion of the frequency range were possible. Use a rom-based composite PLL/VCO chip that has NO equal for replacement, MANDATE unusual I.F. freqs and no "extra" lines to play with. Make that sucker 99.9% impossible to expand! Cast the boards in epoxy or something like that.

2) the stations were Registered/Licensed. Nothing expensive, just a simple form which insures a better attitude by the users of the frequencies, and a unique callsign identifier for your packet-headers.

3) That the FCC could have an enforcement budget to police violators. Like: a) The LIDS that decide to play music, curse or jam. b) The 'LinearLids', who think 1Kw operation is "cool". c) The jokers who insist on running out-of-band, mixed mode, or who refuse identify their stations. d) The clowns that modify CB gear to encroach on the Amateur 10 meter band. Send these guys to jail for 10+ years!

>enough people are interested, the FCC can be persuaded to modify these existing regulations.

Don't count on it! Amateur Radio is what it is because everyone involved has a vested interest in keeping the 'GoodBuddy' types from overrunning the bands, the FCC's enforcement budget is almost nil, expansion that does not provide for the safeguards listed above has no chance. Period. You want more? CB radio is a sewer, the majority of CB users are braindead, burntout Kids that have so little to do with their miserable lives they congragate around the 11 meter band hoping for any kind of amusement. Just try cleaning it up, I did. I managed to interest 7 people to UPGRADE to Novice tickets..you can do the same.

--

-Avatar-> (aka: Erik K. Sorgatz) KB6LUY +-------------------------+
Citicorp(+)TTI *----------> panic trap; type = N+1 *
3100 Ocean Park Blvd. (213) 450-9111, ext. 2973 +-------------------------+
Santa Monica, CA 90405 {csun,philabs,randvax,trwrb}!ttidca!ttidcb!sorgatz **

81. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-18 15:48:36 UTC
From: john@anasaz.UUCP
Message-ID: <640@anasaz.UUCP>
Source record: 19920
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <982@ssc-bee.ssc-vax.UUCP> maa@ssc-vax.UUCP (Mark A Allyn) writes:
>
>If they use lasers for speed detections, they would have to meet
>very VERY stringent laser safety standards. Aiming a laser at
Lasers are already used in some places.
>things are unmanned and at the mercy of those who hate them and what they
Once again: The one around here is manned by an armed policeman! I suspect
that any usage in the US they will be manned or otherwise well protected,
given out penchant for vandalizing things that we like, much less things
that we dislike!
--
John Moore (NJ7E) hao!noao!mcdsun!nud!anasaz!john
(602) 870-3330 (day or evening)
The opinions expressed here are obviously not mine, so they must be
someone else's.

82. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-18 16:33:39 UTC
From: welty@sunbarney.steinmetz
Message-ID: <9597@steinmetz.steinmetz.UUCP>
Source record: 19921
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <2588@gryphon.CTS.COM> bilbo@pnet02.cts.com (Bill Daggett) writes:
... various comments of Bill's omitted ...

-- I'd like to dispute one of them, but this is massively crossposted, so
instead I'll point out that we (all of us, in all three newsgroups here)
have been doing a terrible job of editing the newsgroups: line. The
relevance of this to sci.electronics is essentially non-existant, and
the relevance to rec.ham-radio is not all that perceptible.

What amazes me (not being a reader of sci.electronics or rec.ham-radio)
is that we rec.autos types haven't yet inspired massive flaming of the
usual sort. sci.electronics and rec.ham-radio must be very pleasant
places by net.standards.

Seriously, please check the newsgroups line.

Enough for now -- I have to go post a light-bulb joke to rec.arts.woebegon

Richard Welty Phone H: 518-237-6307 W: 518-387-6346
{rochester,philabs,uunet}!steinmetz!welty
welty@ge-crd.ARPA
``join the auto-sports mailing list -- it's easy and it's fun''

83. Re: build-it-yourself EPROM erasers (Just the facts)

Newsgroup: rec.ham-radio
Date: 1988-02-18 18:49:58 UTC
From: krc@cs.purdue.EDU
Message-ID: <3244@arthur.cs.purdue.edu>
Source record: 19922
Cross-posted to: rec.ham-radio,sci.electronics

In article <3711@ihlpf.ATT.COM>, straka@ihlpf.ATT.COM (Straka) writes:
> Any EPROM worth its salt (so to speak :-)) will in actuality last at least
> 10 times the standard 5-year specification. Good ones are quite bullet-proof.
> Rich Straka ihnp4!ihlpf!straka

I thought the *lower* limit was at least 100 yrs!!
Does this mean in say, 25 years for some of the more marginal products, the
application in question will develop a senility complex?

I'll be driving my classic '88 Ford Mustang GT (with a souped up EFI chip, of
course) along at 30 mph in 2013 and all of a sudden, hyperspeed, or
fried engine?

> Advice for the day: "MSDOS - just say no."
Works for me!

--
Kenny "_R_o_b_o_B_r_o_t_h_e_r" Crudup krc@arthur.cs.purdue.edu
Purdue University CS Dept.
W. Lafayette, IN 47907 1-31-88. A great day for football,
+1 317 494 7842 and Black Americans. Yo Dougie!

84. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-18 19:23:01 UTC
From: mrapple@uop.edu
Message-ID: <1092@uop.edu>
Source record: 19923
Cross-posted to: rec.ham-radio,sci.electronics

Just to ask, what would you people think of allowing F3E type
modulation on 27 Mhz? If nothing else, the capture effect would
work wonders, I think. It's probably not likely that all of
11m would convert, but I think at least ALLOWING F3E on Ch
30-40 and allowing ASCII/Baudot digital codes on Ch 35-40 would
be a pretty good idea (the latter in response to the discussion
in progress).

Nick Sayer | Packet Radio: N6QQQ @ WA6RDH | CMS: SYSOP@STOKTON%STOCKTON
uucp: ...!sdcsvax!ucbvax!ucdavis!uop!mrapple | Fido: 161/31
Disclaimer: You didn't REALLY believe that, did you?
cat flames > /dev/null

85. Re: Speech Synthesizer Info

Newsgroup: rec.ham-radio
Date: 1988-02-18 23:29:05 UTC
From: tedk@ihuxv.ATT.COM
Message-ID: <2467@ihuxv.ATT.COM>
Source record: 19924
Cross-posted to: comp.sys.ibm.pc,sci.electronics,rec.ham-radio

In article <2459@ihuxv.ATT.COM> tedk@ihuxv.ATT.COM (Kekatos) writes:
>Review and Information on B.G Micro Text to Speech Board.
>------ --- ----------- -- --------- ---- -- ------ ------
> COMPUTALKER SPEECH SYNTHESIZER
> ----------- ------ -----------
>from B.G. MICRO (214) 271-5546 (Dallas TX)
>
>I purchased the B.G. MICRO Computalker board for $89.95.

The Computalker is now priced at $69.95

Ted G. Kekatos
backbone!ihnp4!ihuxv!tedk (312) 979-0804
AT&T Bell Laboratories, Indian Hill South, IX-1F-460
Naperville & Wheaton Roads - Naperville, Illinois. 60566 USA

86. Beating Robocop

Newsgroup: rec.ham-radio
Date: 1988-02-19 02:34:52 UTC
From: ralphw@IUS3.IUS.CS.CMU.EDU
Message-ID: <901@PT.CS.CMU.EDU>
Source record: 19925
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

Does 5th amendment protection apply in cases like this? It would seem that if your countermeasures are serious enough ('interfering with a police officer') to warrant a criminal suit rather than a civil one ('speeding'), then you might legitimately be able to take the 5th, and

I'm suprised that no one has suggested spoofing the radar. I can understand the admirable restraint of the rec.ham-radio community, since proposing something that would violate FCC regs.

Making the license plate 'invisible' to the camera is a neat hack.
The original post didn't make clear whether the photo takes a picture of the front of the car or the back. In some states (PA & WVA), front plates are not required, and people tend to buy 'bumper-sticker' style plates for their cars. In PA, this is a popular one:

```
Normal rear plate 'hack' front plate
+----------------------+ +----------------------+
|You've got a friend in | |You've got a friend in |
| | | |
| XXX XXX | | JESUS |
| | | |
| T Pennsylvania | | Pennsylvania |
+----------------------+- +----------------------+-
```

Anyway, I recall a story about a guy with 'NONE' on a vanity plate, and he ended up with a lot of extra parking tickets. I see the same thing happening here, except with more amusing results.

--
- Ralph W. Hyre, Jr.

Internet: ralphw@ius2.cs.cmu.edu Phone:(412)268-{2847,3275} CMU-{BUGS,DARK}
Amateur Packet Radio: N3FGW@W2XO, or c/o W3VC, CMU Radio Club, Pittsburgh, PA

87. NPRM 87-14 (220 MHz) here we go again !!!!!!!!!

Newsgroup: rec.ham-radio
Date: 1988-02-19 14:16:07 UTC
From: ewb@raybed2.UUCP
Message-ID: <1123@raybed2.UUCP>
Source record: 19926
Cross-posted to: rec.ham-radio,rec.ham-radio.packet,sci.electronics

In a late move the FCC announced that United Parcel Service is
trying to re-open the reply period for comments on NPRM 87-14.
It seems that someone has sold U P S on the idea of an A.C.S.B.
truck-truck radio system in the 215-222 MHz band. In other words,
they were sold a bill of goods and are trying to save themselves.
If the period for reply is re-opened, (which was closed 6 months ago), then
this set a precedent for further openings-closings-openings-closings...etc.
This could cause havic in the ranks for this and all other NPRMs relating
to ham radio !!!
As a course of action, please write to the commission asking them not to
allow comments by UPS in for consideration. Also, for all you people who
mail order equipment of any kind, PLEASE DO NOT ALLOW THE SALES PEOPLE TO
SHIP VIA UPS !!!! USE U.S MAIL, FEDERAL, FLYING TIGERS.....ETC. Maybe
this will help just a little. 73
Gene WA1UXA

88. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-19 17:30:34 UTC
From: john@anasaz.UUCP
Message-ID: <645@anasaz.UUCP>
Source record: 19777
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <9597@steinmetz.steinmetz.UUCP> welty@sunbarney.UUCP (richard welty) writes:
>have been doing a terrible job of editing the newsgroups: line. The
>relevance of this to sci.electronics is essentially non-existant, and
>the relevance to rec.ham-radio is not all that perceptible.
As the original poster of this Robocop Spotted article,
let me point out that I posted to three newsgroups for a reason:
The interest in rec.autos is obvious.
rec.ham-radio has many readers interested in the technology involved.
rec.electronics also has readers interested in the technology who may
not read rec.ham-radio.
Once side threads develop, editing the newsgroups line makes a lot of sense.
--
John Moore (NJ7E) hao!noao!mcdsun!nud!anasaz!john
(602) 870-3330 (day or evening)
The opinions expressed here are obviously not mine, so they must be
someone else's.

89. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-19 18:12:39 UTC
From: sorgatz@ttidca.TTI.COM
Message-ID: <1960@ttidca.TTI.COM>
Source record: 19778
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <1175@ucdavis.ucdavis.edu> ccs016@deneb.ucdavis.edu.UUCP (Patrick Tully pstully@ucdavis) writes:
> I've heard this too. I believe it is true. The peak should start
>somewhere around 1991. This is also the time when California is suppose

Why not look at the ARRL Long Range Prediction charts? Real Radio Scientists have spent years developing this stuff, it might surprise you..and BTW most of the rumor-legends of CB are vaporware, this is another case of same.

> This experimenting was done on Side band using a 3 beamed yagi, horizontal.

"Side band"??? "a 3 beamed yagi, horizontal"?? Would you mind explaining these strange terms? Yagi's *are* beams. Some have 3 elements...these are the kind of communication problems that prevail in the 27 Mhz universe..
..my suggestion, Mr. Tulley, is to actually concentrate on learning the real terminology, then some basic theory. If you've got any time left, try some Morse code practice. If you're very lucky, you might just pass your Novice ticket - but not if you insist on clinging to this CB folklore like a security blanket! Give it up! It's worthless. As far as Packet on CB goes, read my posting to that other technotwit on 'sci.electronics', there isn't a snowball's chance in Hell that the FCC will grant *ANY* additional freqs or perks to the 11 meter crowd, so grow up! Get into real radio...

--
-Avatar-> (aka: Erik K. Sorgatz) KB6LUY +-------------------------+
Citicorp(+)TTI *----------> panic trap; type = N+1 *
3100 Ocean Park Blvd. (213) 450-9111, ext. 2973 +-------------------------+
Santa Monica, CA 90405 {csun,philabs,randvax,trwrb}!ttidca!ttidcb!sorgatz **

90. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-19 23:36:05 UTC
From: snoopy@doghouse.gwd.tek.com
Message-ID: <9774@tekecs.TEK.COM>
Source record: 19779
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <602@anasaz.UUCP> john@tower.UUCP (John Moore) writes:

> Finally, it will in the future
> use a laser, making it totally undetectable with microwave radar
> detectors.

I assume they won't care about zapping people in the eye with lasers
anymore than they care about zapping them in the eye with microwaves.

-sigh-

Snoopy
tektronix!doghouse.gwd!snoopy
snoopy@doghouse.gwd.tek.com

"And with multiple vapor-processors, it does 50 vapor-MIPS."

91. Re: build-it-yourself EPROM erasers

Newsgroup: rec.ham-radio
Date: 1988-02-20 00:02:17 UTC
From: sfaber@ihlpg.ATT.COM
Message-ID: <4878@ihlpg.ATT.COM>
Source record: 19780
Cross-posted to: rec.ham-radio,sci.electronics

> Not really true. 253.7 nanometers just happens to be the primary wavelength
> of the short-wave UV emitted by the typical lamps used for this application.
>
> What this spec really means is that you can't use long-wave UV lamps (like
> black lights, or mercury-vapor sun lamps) to do the job. It also means that
> you can't put ordinary glass or plastic in the light path either. Only
> special materials, such as fused quartz or some boro-silicate glasses have
> the necessary transmissivity at that particular wavelength.

I bought an old sunlamp at a garage sale that had a quartz tube with
a drop of Hg and no electrodes. It was excited by rf from a tube
oscillator in the base of the lamp. These work great as EPROM
erasers. Mine erases a row of EPROMS the length of the tube (~7")
in about 10 minutes. These lamps were made in Chicago and sold in
the 1940s or 50s I think.
The inner quartz tubes from broken mercury vapor street lights
or newer sunlamps will also work (these contain electrodes) and may
be excited with a fluorescent light ballast. In general if you can
smell ozone from your lamp, you probably have a good source of short
wavelength UV.
Steve N9FYX

92. Re: Beating Robocop

Newsgroup: rec.ham-radio
Date: 1988-02-20 18:16:34 UTC
From: todd@uop.edu
Message-ID: <1100@uop.edu>
Source record: 19781
Cross-posted to: sci.electronics,rec.ham-radio

In article <901@PT.CS.CMU.EDU>, ralphw@IUS3.IUS.CS.CMU.EDU (Ralph Hyre) writes:
> Anyway, I recall a story about a guy with 'NONE' on a vanity plate, and
> he ended up with a lot of extra parking tickets. I see the same thing
> happening here, except with more amusing results.

It was a guy in california, who put his request in for a personal plate.
They did not have the one he put and on the option line he put "no plate"
meaning to him he did not want anything other than his choice..

He began to get numerous tickets from all over the state, of course for
"no plate". Subsequently, the phrase used by the police was changed..

It was mentioned on the radio report, I should have written it down, and
gotten another plate done!

:-)

93. Spring Ham-Radio, and electronics Flea Markets

Newsgroup: rec.ham-radio
Date: 1988-02-20 19:40:09 UTC
From: ewb@raybed2.UUCP
Message-ID: <1124@raybed2.UUCP>
Source record: 19782
Cross-posted to: rec.ham-radio,rec.ham-radio.packet,sci.electronics,misc.forsale,misc.wanted

Subject: itch n scratch with fleas

Note 437.1 The latest Fleas 1 of 1
-< Flea list 29 Jan 1988 >-

********** ********************
* PAGE 1 * * WINTER EVENTS *
********** ********************
INFORMATION AS OF 29 JAN 1988

!!!!!!!!!! INFORMATION SUBJECT TO CHANGE !!!!!!!!!!
****
CLUB: Northern Vt. Winter Hamfest. EVENT: Flea Market and Auction
PLACE: Milton High School, Milton Vt. DATE: 27 Feb 1988 (SAT)
DEALER SETUP: 0830 OPEN TO PUBLIC: 0900 until 1500
ADMISSION: $2.00 TABLE PRICES: No extra charge to sellers
TALK-IN: 145.47- and 146.85+ REFRESHMENTS:
OTHER NOTES: The Milton High School is conveniently located on Rt. 7 in the
village of Milton, 4 Miles north of exit 17 off I-89. Plenty of free parking
Avail. There will be FCC exams Avail. (no per-registration is needed for exams)
For more info call 802-879-6589 in the evenings.
****
CLUB: York Winterfest EVENT: Flea market
PLACE: Dover, PA. DATE: 06 Mar, 1988
DEALER SETUP: OPEN TO PUBLIC: 0800
ADMISSION: $4.00 TABLE PRICES: $10.00
TALK-IN: 146.37/.97 and 147.93/.33 REFRESHMENTS: YES
OTHER NOTES: The event is at the Dover Fire Hall, Dover, PA. There is FREE
Tailgating and two floors inside. The XYL is FREE. For advance info. Write
YORK WINTERFEST, 2449 Heidlersburg Rd. Gettysburg, PA. 17325, or call
717-528-8412.
****
CLUB: ICRC A.R.C. EVENT: Flea Market
PLACE: American School for the Deaf DATE: 20 March 1988
DEALER SETUP: OPEN TO PUBLIC: 0900 to 1400
ADMISSION: TABLE PRICES: $10.00 in advance.
TALK-IN: 146.28/.88 REFRESHMENTS: Yes
OTHER NOTES: Take Rt 84 to West Hartford area, the school is on the Rt 84 Exit
sign. American School for the Deaf, 139 N. Main Street. Contact Chuck Motes
K1DFS at 22 Woodside Lane, Plainville. Ct. 06062. Telephone 203-747-6377.

********** ********************
* PAGE 2 * * SPRING EVENTS *

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****
CLUB: Framingham A.R.A. EVENT: Flea Market
PLACE: Framingham league Center DATE: 10 April 1988
DEALER SETUP: 0830-1000 OPEN TO PUBLIC: 1000
ADMISSION: $2.00 TABLE PRICES: $10.00 in advance
TALK-IN: 147.75/.15 REFRESHMENTS: Yes
OTHER NOTES: For Flea Market info. call Jon, K1VVC at 617-877-7166. Table price includes 1 admission. For advance table reservations send check to Framingham Amateur Radio Assoc. 37 Lyman Road, Framingham, Ma 01701.
>From Rt 128 go West on Rt. 9 from Rt 495 go east on Rt 9. Take Rt 126 south towards Downtown Framingham, (about 2 miles). after the traffic signal near Dunkin Donuts, the Civic League is 2nd and 3rd buildings on the right. Parking is nearby.
****
CLUB: South Shore A.R.C. EVENT: Indoor Flea Market
PLACE: Viking Club, Braintree Ma. DATE: 10 April SUN (RAIN OR SHINE)
DEALER SETUP:0900 OPEN TO PUBLIC: 1100 until 1600
ADMISSION: $1.00 TABLE PRICES: $10.00 in advance
TALK-IN: REFRESHMENTS: YES
OTHER NOTES: The Viking club is at 410 Quincy Ave, Braintree, Ma. Tables are $10.00 in advance (includes 1 free admission) before 7 April. For more info contact Hal Jones WB1ABM, 48 Saning Rd., North Weymouth, Ma. 02191. Tables are $12.00 on the day of the Flea Market, but there is no guaranteed table space. make checks payable to South Shore Amateur Radio Club, confirmation check receipt will be sent. No cancellation refund after 7 April. Questions may be answered by calling 617-335-57777 (Hal) in the evenings.
****
CLUB: Southington A.R.A. EVENT: Flea Market
PLACE: National Guard Armory DATE: 17 April (SUN)
DEALER SETUP: 0800 OPEN TO PUBLIC: 0900 until 1300
ADMISSION: $2.00 TABLE PRICES: $8.00 in Adv. $10.00 Adv
TALK-IN: 146.28/.88 and 146.500 Sx. REFRESHMENTS: YES
OTHER NOTES: The event in in Southington Ct. at the National Guard Armory at 590 Woodruff Street. Tables are $8.00 in advance (before 13 April) or $10.00 at the door. Two persons admitted with each table purchased. For more info. contact Chet, KA1ILH from 1700 to 2100 at 628-9346.
****
CLUB: Montachusett A.R.A. EVENT: Flea Market
PLACE: George Wallace Civic Center DATE: 24 April 1988 (Sun.)
DEALER SETUP: 08:30 OPEN TO PUBLIC: 1000 until 1500
ADMISSION: $2.00 TABLE PRICES: $10.00
TALK-IN: 144.85/145.45 and .52 direct REFRESHMENTS:
OTHER NOTES: For table reservations contact, James Beauegard, KB1AY, 7 Mountain Ave, Fitchburg, Ma. 01420. The event in in Fitchburg Mass.
****

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* PAGE 3 * * SPRING EVENTS *
********** **********

****
CLUB: Dayton Hamvention EVENT: Hamvention/flea market
PLACE: HARA Arena DATE: 29,30 April and 1 May
DEALER SETUP: Friday OPEN TO PUBLIC: Friday at noon.
ADMISSION:$8.00 early $10.00 at door TABLE PRICES: $23.00 for 1 space
TALK-IN: REFRESHMENTS: Plenty
OTHER NOTES: For General Info call 513-433-7720 or write PO. bx 2205 Dayton Ohio. For Flea Market info call 513-898-8871, Foe logging info call 513-223-2612, no reservations by phone. Spaces are $23.00 for one, $50.00 for two adjacent or $150.00 for three Adjacent. Make checks payable to Dayton Hamvention, box 2205, Dayton, Ohio 45401. There is a maximum of three spaces per person (non-Transferable) Ticket (valid for all 3 days) will be sold in ADVANCE ONLY. NO spaces sold at the gate. Vendors MUST order registration ticket when ordering Flea Market spaces.
****
CLUB: HOSS TRADERS EVENT: FLEA MARKET
PLACE: Kingston N.H. Fairgrounds DATE: 07 May. 1988(SAT)
DEALER SETUP: Anytime OPEN TO PUBLIC: All night Friday & Sat.
ADMISSION: $5.00 TABLE PRICES: $5.00
TALK-IN: 146.40/147.00 or .52 direct REFRESHMENTS: LOTS
* NOTE!!!!! THE HOSSTRADERS SWAPFEST WILL BE HELD IN THE SPRING ON 7 MAY 1988 *
* BUT IT WILL NOT BE HELD AT THE DEERFIELD FAIRGROUNDS. THE NEW LOCATION IS *
* KINGSTON FAIRGROUNDS, KINGSTON, N.H. AT THE SOUTHERN JUNCTION OF RT 111 AND *
* RT 125 IN KINGSTON. *
OTHER NOTES: RAIN OR SHINE (ANNUAL SPRING SWAPFEST) Friday night camping starts at 1600. Profits benefit the Boston Burns Unit of the Shriner's Hospital for Crippled Children. Flea market open at 0600 in the morning Sat.
Children. Questions can be answered by sending an SASE to Joe Demaso, Star Rt. Box 56, Bucksport, Me. If you plan to camp on the Fairgrounds your camper should be self contained, also there are three commercial camp grounds within walking distance of the fairground.
****
CLUB: Mid Coast ARC Inc. EVENT: HAMFEST
PLACE: Fairgrounds, Union, Me. DATE: 16 July 1988
DEALER SETUP: OPEN TO PUBLIC:
ADMISSION: TABLE PRICES:
TALK-IN: 146.88 or 146.985 REFRESHMENTS: YES
OTHER NOTES: There will be a Lobster/Clam bake, Young adult programs, ladies programs, Swap tables, tail gating, Commercial dealers, Arts and crafts, net meetings Packet Radio Demos, Camping, Museum of Maine Heritage, Pot Luck Supper, and entertainment. For More info contact Lynda Hawke, KA1FKS, at 198 Cony Street, Agusta, Me. 04330. (Tel. 207-623-2427). Packeteers can leave a message for KQ1L @ KA1NNN. NOTE commercial Dealers contact Win Jackson P.O. Box 213, East Winthrop, Maine 04343.
****
CLUB: Foundation for Amateur Radio EVENT: FLEA MARKET
PLACE: Gaithersburg, MD DATE: 11 SEP.1988 (SUN)
DEALER SETUP: Sat Night is avail. OPEN TO PUBLIC: 0700
ADMISSION: $4.00 (buyers) TABLE PRICES:
TALK-IN: REFRESHMENTS:
OTHER NOTES: The event is held at the Fair Grounds in Gaithersburg, MD.

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********** **********
* PAGE 3 * * FALL EVENTS *
********** **********

****
CLUB: ARRL Hamfest EVENT: Hamfest/ Flea market
PLACE: Sheraton Hotel, Boxboro, Ma. DATE: 1 and 2 Oct. 1988
DEALER SETUP: OPEN TO PUBLIC:
ADMISSION: TABLE PRICES:
TALK-IN: REFRESHMENTS:
OTHER NOTES: For more info call 617-631-7388
****
If anyone has information about upcoming events, please send it to John Roberts
5 Christina Rd., Merrimack,N.H. 03054 so I can add it to the list. A copy of
[this list may be obtained by sending an S.A.S.E. to the above Address.
****

********** **********
* INFORMATION SUBJECT TO CHANGE * * LAST UPDATE 28 JAN 1988 *
********** **********
****
****
* NEW ENGLAND'S BIGGEST HAM RADIO FLEA MARKET *
****
The HOSS TRADERS will hold their ANNUAL SPRING SWAPFEST on Saturday 07 MAY
1988 at the Kingston Fairgrounds, Kingston New Hampshire.(some info different)
Friday night camping opens at 4:00pm Friday. Admission is $2.00
Good food available. All profits benefit the Boston Burns unit
of the Shriners' Hospital for Crippled Children. Talkin on .52 direct or
146.40/147.00. Questions can be answered by sending an S.A.S.E. to Joe
Demaso K1RQG, Star route box 56 Bucksport Me.
****

Fall '88
****
* NEW ENGLAND'S BIGGEST HAM RADIO FLEA MARKET *
****
The HOSS TRADERS will hold their FIFTH ANNUAL FALL SWAPFEST on Saturday 00 OCT
1988 at >>>>>>>>>>A Location To Be Determined--Possibly Deerfield--<<<<<<<<<<
Friday night camping opens at 4:00pm Friday. Admission is $2.00 tail Gating Inc.
Good food available. All profits benefit the Boston Burns unit
of the Shriners' Hospital for Crippled Children. Talkin on .52 direct or
146.40/147.00. Questions can be answered by sending an S.A.S.E. to Joe
Demaso K1RQG, Star route box 56 Bucksport Me.
****

94. Re: Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-21 05:30:56 UTC
From: jans@tekcrl.TEK.COM
Message-ID: <2333@tekcrl.TEK.COM>
Source record: 19783
Cross-posted to: rec.ham-radio,sci.electronics

<...what would you people think of allowing F3E type modulation on 27 Mhz?>

What do I think? I think CBers would be up in arms as soon as they discovered they'd have to give up every other channel in order to support the bandwidth needed. I think they should be going the other direction -- make AM rigs illegal, only allow SSB, and double the number of available channels.

:::::: Software Productivity Technologies --- Smalltalk Project ::::::
:::::: Jan Steinman N7JDB Box 500, MS 50-470 (w)503/627-5881 ::::::
:::::: jans@tekcrl.TEK.COM Beaverton, OR 97077 (h)503/657-7703 ::::::
--
(Stamp out facist .signature restrictions!)

95. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-21 17:24:48 UTC
From: tga@eleazar.Dartmouth.EDU
Message-ID: <8216@eleazar.Dartmouth.EDU>
Source record: 19784
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <9774@tekecs.TEK.COM> snoopy@doghouse.gwd.tek.com (Snoopy) writes:
>In article <602@anasaz.UUCP> john@tower.UUCP (John Moore) writes:
>
>> Finally, it will in the future
>> use a laser, making it totally undetectable with microwave radar
>> detectors.
>
>I assume they won't care about zapping people in the eye with lasers
>anymore than they care about zapping them in the eye with microwaves.

Small problem with the logic here... Getting shot in the eye with laser
radiation has been scientifically proven to cause retinal damage, even
at fairly low doses. Microwaves are harmless, except at high doses (all
they do to biological tissue is heat it, not cause cromosome damage)
To put it in perspective, a microwave oven emits about 700 watts (or more)
of power inside it. Radar guns are on the order of a few hundred milliwatts
(or about .001 times the power of an oven) All that a cop's radar gun will
do to you is heat your body tissue about .0000001 degrees.
-Greg

[--]
[Greg Ames US Mail - HB 1362, Dartmouth College]
[E Mail - tga@eleazar.Dartmouth.EDU Hanover, NH 03755]
[--]

96. Re: build-it-yourself EPROM erasers (Just the facts)

Newsgroup: rec.ham-radio
Date: 1988-02-21 21:41:53 UTC
From: markz@ssc.UUCP
Message-ID: <1034@ssc.UUCP>
Source record: 19785
Cross-posted to: rec.ham-radio,sci.electronics

There are three types of flourescent lights that produce enough UV to zap EPROMS.

The Black Light and Black Light Blue Phosphor peaks at 350 nanometers and will take 3 1/2 days (Back in my starving student days I was patient)
These bulbs are typed FnnTn/BL or FnnTn/BLB.
The first number is the wattage, the second the Tube diameter in 1/8ths of and inch, and the phosphor is the Alphanumeric code at the end.
The BL produces visible light. The BLB is the good old poster light with a purple filter.

The Sunlamp Phosphor peaks at 300 nanometers, and should take less time to erase the PROMS.

Germicidal Lights are just the raw mercury plasma in a quartz tube and take 3 to 6 minutes to erase a prom sitting on the tube.
They are numbered G??T?? and plug in to the same fixture as the equivalent F numbered flourescent tube.
They peak at the 250 nanometer wavelength.

Recomendation: Buy the Heathkit, the cost of the parts is about the same. A germicidal lamp at a speciality lamp house will run $30 to $50. A lot for a flourescent lamp with half the stuff left out.

97. Re: build-it-yourself EPROM erasers (Just the facts)

Newsgroup: rec.ham-radio
Date: 1988-02-21 21:56:05 UTC
From: markz@ssc.UUCP
Message-ID: <1035@ssc.UUCP>
Source record: 19786
Cross-posted to: rec.ham-radio,sci.electronics

```
Safety warning:
Germicidal Lamps will rot your eyeballs and cause skin cancer. There is a
reason for the interlock switches on EPROM erasers.
```

98. Re: build-it-yourself EPROM erasers

Newsgroup: rec.ham-radio
Date: 1988-02-22 18:54:15 UTC
From: jimc@iscuva.ISCS.COM
Message-ID: <1185@iscuva.ISCS.COM>
Source record: 19787
Cross-posted to: rec.ham-radio,sci.electronics

In article <4878@ihlpg.ATT.COM> sfaber@ihlpg.ATT.COM (Faber) writes:
>I bought an old sunlamp at a garage sale that had a quartz tube with
>a drop of Hg and no electrodes. It was excited by rf from a tube
>oscillator in the base of the lamp. These work great as EPROM
>erasers. Mine erases a row of EPROMS the length of the tube (~7")
>in about 10 minutes. These lamps were made in Chicago and sold in
>the 1940s or 50s I think.
> The inner quartz tubes from broken mercury vapor street lights
>or newer sunlamps will also work (these contain electrodes) and may
>be excited with a fluorescent light ballast. In general if you can
>smell ozone from your lamp, you probably have a good source of short
>wavelength UV.

It's hard to beat a $10 germicidal lamp from your local electrical
supply house. An old flourescent ballast and starter and you're in
business. I built mine into an old wooden box.

+----------------+
! II CCCCCC ! Jim Cathey
! II SSSSCC ! ISC Systems Corp.
! II CC ! TAF-C8; Spokane, WA 99220
! IISSSS CC ! UUCP: uunet!iscuva!jimc
! II CCCCCC ! (509) 927-5757
+----------------+
"With excitement like this, who is needing enemas?"

99. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-22 20:31:39 UTC
From: mrapple@uop.edu
Message-ID: <1122@uop.edu>
Source record: 19788
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

Come on, let's have a rational discussion here. You have made the point already that it is easier to get a Novice ticket than it is to get into the average college fraternity (this is true...). There is no reason to go on and on about it. Getting antagonistic doesn't help anything. It just sends a message to non-hams that we are an elitist society with our noses higher than our scalp-rugs. Unfortunately, some actions the ARRL take help to give this impression. They don't need your help to give us more bad press.

Nick Sayer | Packet Radio: N6QQQ @ WA6RDH | CMS: SYSOP@STOKTON%STOCKTON
uucp: ...!sdcsvax!ucbvax!ucdavis!uop!mrapple | Fido: 161/31
Disclaimer: You didn't REALLY believe that, did you?
cat flames > /dev/null

100. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-23 04:08:56 UTC
From: stevewa@upvax.UUCP
Message-ID: <321@upvax.UUCP>
Source record: 19789
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

>(...) All that a cop's radar gun will
>do to you is heat your body tissue about .0000001 degrees.
> -Greg

Generally speaking, I'm sure that's true. HOWEVER, a friend of mine owns a radar gun (picked up at a police auction, he's a traffic reporter for a radio station, so he has a good use for it) and he found out the hard way that they can indeed be dangerous. He made the mistake of pointing it at his face when it was turned on (OK, he's not too bright :-)), and burned his face pretty good from just a few seconds of exposure. I don't know how quickly the power of the microwaves decreases with distance (probably expotential) but it seems that with the longer amount of exposure it could be POTENTIALLY dangerous.

Steve Ward stevewa@upvax.UUCP
University of Portland !tektronix!upvax!stevewa

101. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-23 13:31:09 UTC
From: will@ge-rtp.GE.COM
Message-ID: <357@ge-rtp.GE.COM>
Source record: 19790
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <1960@ttidca.TTI.COM>, sorgatz@ttidca.TTI.COM (Avatar) writes:
> In article <1175@ucdavis.ucdavis.edu> ccs016@deneb.ucdavis.edu.UUCP (Patrick Tully pstully@ucdavis) writes:
>
> > This experimenting was done on Side band using a 3 beamed yagi, horizontal.
>
> "Side band"??? "a 3 beamed yagi, horizontal"?? Would you mind explaining
> these strange terms? Yagi's *are* beams. Some have 3 elements...these are
> the kind of communication problems that prevail in the 27 Mhz universe..
> ..my suggestion, Mr. Tulley, is to actually concentrate on learning the
> real terminology, then some basic theory. If you've got any time left, try
> some Morse code practice. If you're very lucky, you might just pass your

(more "suggestions" deleted)

Way to go, Erik. You've just shown Patrick what an open, helpful, friendly fraternity the ham radio community is :-). Seriously Patrick, there is a LOT you can learn from ham radio, and there are a LOT of friendly, open people out there who will be more than happy to help you. Hams are (justifiably) proud of their hobby, but that shouldn't keep them from helping other non-ham radio enthusiasts. Venom aside, Erik's advice is sound. Get an amateur license and REALLY start enjoying radio! I'm glad I did.

--
Will Gwaltney | Usenet: will@ge-rtp.GE.COM or
GE Microelectronics Ctr. | ...!mcnc!ge-rtp!will
Box 13049 MD 7T2-01 |
RTP, NC 27709 | The Ether: N4PGG (Advanced or bust!)

102. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-23 22:12:38 UTC
From: krc@cs.purdue.EDU
Message-ID: <3294@arthur.cs.purdue.edu>
Source record: 19791
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <321@upvax.UUCP>, stevewa@upvax.UUCP (Steve Ward) writes:
> Generally speaking, I'm sure that's true. HOWEVER, a friend of mine owns
> a radar gun and he found out the hard way
> that they can indeed be dangerous. He made the mistake of pointing it at
> his face when it was turned on and burned
> his face pretty good from just a few seconds of exposure.
> Steve Ward stevewa@upvax.UUCP

I can see it now, in some bass-ackwards town with a shithead sheriff and some poor slob with no money stopped doing 105. "You got two choices: You can pay the fine or smile inna this here DE-tek-tor for a coupla minutes. Heh Heh Heh."

Or better yet- spot microwaving for those foods that don't need the *whole* oven! Keeps the hot-side hot, and the cold-side cold! (*This technology courtesy of the McDonalds corporation)

--
Kenny "_R_o_b_o_B_r_o_t_h_e_r" Crudup krc@arthur.cs.purdue.edu
Purdue University CS Dept.
W. Lafayette, IN 47907 1-31-88. A great day for football,
+1 317 494 7842 and Black Americans. Yo Dougie!

103. CB is a sewer (was: Re: low power license free packet?)

Newsgroup: rec.ham-radio
Date: 1988-02-24 00:54:05 UTC
From: faigin@sdcrdcf.UUCP
Message-ID: <5102@sdcrdcf.UUCP>
Source record: 19792
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <1943@ttidca.TTI.COM>, sorgatz@ttidcb.tti.com (Erik Sorgatz) writes:
>CB radio is a sewer, the majority of CB
>users are braindead, burntout Kids that have so little to do with their
>miserable lives they congragate around the 11 meter band hoping for any
>kind of amusement.

I occasionally read rec.ham-radio. When I find an occasional
article on CB radio, it is generally blasting the CBers. This
attitude upsets me.

I am a member of a CB club based in the San Fernando Valley
(Greater Los Angeles), California. The legal name of this club
is "Valley CBers Inc." -- informally it is called the "Over the
Hill Gang". The purpose of this club is threefold:

1) to exchange traffic information on the I-405 freeway
during rush hours -- this benefits not only club members but
others who monitor channel 14 (the channel the club uses).
This is a form of SERVICE.

2) to perform a SAFETY service, by notifying base
stations (either REACTS or club members with base stations or
cellular telephones) of traffic accidents that do not have police
or ambulances on the scene.

3) to provide a SOCIAL outlet for club members -- garage
sales, hayrides, picnics, spagetti dinners, etc.

The club has over 200 members, I think. The occupations of these
members range from professionals such as lawyers or engineers to
auto mechanics to small business owners to ... you name it.

As with any medium, it is the special cases that bring about a
reputation. Yes, there are twits on the airwaves. There are
people who like to blast across the country with their power.
There are twits who like to send dead carriers and misuse the
airwaves. We don't like them either.

But it is wrong to characterize the entire users of the spectrum
as "braindead, burntout Kids". Would it be correct to
characterize ham radio users as braindead, burntout engineers? :-)

Daniel Faigin --- "Otherbeast" --- OTHG Channel 14

--
W: UNiSYS/Defense Systems/System Development Group

2400 Colorado MD 91-01;Santa Monica CA 90406;213/829-7511 x6393
H: 8333 Columbus Avenue #17; Sepulveda CA 91343
Email: (uucp) faigin@sdcrdcf.UUCP (arpa) faigin@RDCF.SM.UNISYS.COM

104. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-24 16:31:57 UTC
From: ssr@COS.COM
Message-ID: <1008@cos.COM>
Source record: 19793
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <321@upvax.UUCP> stevewa@upvax.UUCP (Steve Ward) writes:
>>(...) All that a cop's radar gun will
>>do to you is heat your body tissue about .0000001 degrees.
>> -Greg
>
>Generally speaking, I'm sure that's true. HOWEVER, a friend of mine owns
>a radar gun (picked up at a police auction, he's a traffic reporter for a
>radio station, so he has a good use for it) and he found out the hard way
>that they can indeed be dangerous. He made the mistake of pointing it at
>his face when it was turned on (OK, he's not too bright :-)), and burned
>his face pretty good from just a few seconds of exposure. I don't know
>how quickly the power of the microwaves decreases with distance (probably
>expotential) but it seems that with the longer amount of exposure it could
>be POTENTIALLY dangerous.
>

As far as tissue "heating" goes radar guns are not anywhere near the
right frequency for heating water (like a microwave oven) however if
the field strength is high enough you can get RF burns just like
from any other transmitter. The field strength changes as the reciprocal
of the distance squared (1/d^2) from the source. However microwaves have
enough penetration to get inside your skull and the effects of that
can be rather interesting (the Russian's tried shooting microwaves through
the windows at the US embassy in Moscow). They vary from "hearing"
a constant buzz to nausea and general irratability. There's an old
saying why Virginia state troopers act so funny sometimes (they used
to position their radar guns in the back of the car pointing forward !)...

ssr

Usual discalaimer at employers request (The opinions stated here are all mine).

105. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-25 13:52:29 UTC
From: bill@trotter.usma.edu
Message-ID: <1170@trotter.usma.edu>
Source record: 19794
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <357@ge-rtp.GE.COM>, will@ge-rtp.GE.COM (Will Gwaltney) writes:
> Venom aside,
> Erik's advice is sound. Get an amateur license and REALLY start
> enjoying radio! I'm glad I did.
>

I agree with the comments in this reply except for one. And this seems to be the most prevalent idea every time the concept of license free packet is brought up. Everyone immediately jumps in here and says "Get your HAM license". Of course they are missing what is probably the biggest point in the whole discussion. The people asking for a Personal Digital Radio Service don't want to be hams. They have no interest in ham radio and probably the most important idea being missed here is that what they want to use packet for would be illegal over amateur radio. Take a look at what is on the various phone BBS's. They are loaded with shareware, for sale ads, and advertisements for various commercial products. All things definitely out of place on amateur radio.
One of the items always brought up when people try to justify the continued existence of amateur radio is the idea of what we were originally chartered to do. And one of these is to develop new means of communication. It now seems like the majority of hams have decided we are developing this stuff for our own personal use.
I believe it was hams who pioneerd such technological breakthrus like SSB, FM, and REPEATERS. These ideas have since proven their value in the commercial world and are now considered just a part of the world we live in. The time has come for packet to take it's place in the world too. There is no reason why, in a few years, it can't be commonplace for there to be a packet box hooked up to the PC in every house. Maybe this is the technology it will take to finally bring services like TELETEXT into the home.

Any comments on this diatribe will be accepted.
(I have my NOMEX underwear on :-)

#include <std_disclaimer.h>

bill gunshannon

UUCP: {philabs}\ US SNAIL: Martin Marietta Data Systems
{phri } >!trotter.usma.edu!bill USMA, Bldg 600, Room 26
{sunybcs}/ West Point, NY 10996
RADIO: KB3YV PHONE: WORK (914)446-7747
AX.25: KB3YV @ K3RLI PHONE: HOME (914)565-5256

106. EXCEPTIONS TO THE RULE! (Re: CB is a sewer!)

Newsgroup: rec.ham-radio
Date: 1988-02-25 21:33:26 UTC
From: sorgatz@ttidca.TTI.COM
Message-ID: <2003@ttidca.TTI.COM>
Source record: 19795
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <5102@sdcrdcf.UUCP> faigin@sdcrdcf.UUCP (Daniel P Faigin) writes:
>I am a member of a CB club based in the San Fernando Valley
>(Greater Los Angeles), California. The legal name of this club
>is "Valley CBers Inc." -- informally it is called the "Over the
>Hill Gang".

<< and a bunch of other stuff about this public-spirited group. >>

Yes, you are correct. The OTHG is a stunning example of the usefulness
that CB radio can provide. My congratulations on the exellent service
that it gives our community. I have listened in on ch 14 from time to
time myself and found the traffic reports quite useful. It is this kind
of exception, however that proves the rule. Listen to ch 14 _AFTER_ 8pm,
listen to some of the, ahem, 'offspring' using MOM&DAD'S base, listen
to the wonderfully glowing dialect, the use of such proper language...
..some of these little marvels are growing up in homes where the CB is
used by the MOM&DAD to communicate on ch 14 on a daily basis...do I
need to remind you about some of the interesting infighting that goes
on in the L.A./Valley on 11 meters?? About some of the beautifully
caring events that result when the "ROGE-O's" and the OTHG had-it-out
over "DXing" on ch 14 during 'mobile time'??....I'm sure you remember
that stuff..
>
>As with any medium, it is the special cases that bring about a
>reputation. Yes, there are twits on the airwaves. There are
>people who like to blast across the country with their power.
>There are twits who like to send dead carriers and misuse the
>airwaves. We don't like them either.
You're absolutly right. There couldn't be more that few million four
letter words used on CB in a given day...;-) Tell you what, listen to
ch 23 or ch 26 some evening...listen to all the inane truckers that
just cannot seem to remember that 31-40 are used for sideband in L.A.
and then ask yourself how the 'Band would sound with the buzz of
packet radio added, fed into a General MC9, bloody-widebanded A.M.
rig, with one of those Wunnerful 10-sweep tube "linear" amps that
all the 'Big-Straps' run...wouldn't that just sound 10-8!?? :-)
>
>But it is wrong to characterize the entire users of the spectrum
>as "braindead, burntout Kids". Would it be correct to
>characterize ham radio users as braindead, burntout engineers? :-)
>
You're right, I should have added a scalar-K to reference the
true picture, and I should have mentioned that there are some
clubs, groups and individuals (like OTHG, and yourself, obviously)

that are using the 11 meter band for it's intended purpose, and
without violating part 95. I think that the constant would be a
number VERY close to 1.0....unfortunately.
>Daniel Faigin --- "Otherbeast" --- OTHG Channel 14
>
yeah, great, I used to have one of those too...now I'm just me...
..unless I get on ch 26 to politely ask the kids to please stop
running their amps so loud that I can't hear 10 meters..;-) Then
I'm --- "The Infinity" --- '73 Dan and here's hoping you will
at least consider upgrading to Amateur Radio, not everyone up
there is as gruff as I am. cul.
--
-Avatar-> (aka: Erik K. Sorgatz) KB6LUY +-------------------------+
Citicorp(+)TTI *----------> panic trap; type = N+1 *
3100 Ocean Park Blvd. (213) 450-9111, ext. 2973 +-------------------------+
Santa Monica, CA 90405 {csun,philabs,randvax,trwrb}!ttidca!ttidcb!sorgatz **

107. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-26 04:10:16 UTC
From: matthew@ucscb.UCSC.EDU
Message-ID: <2114@saturn.ucsc.edu>
Source record: 19796
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <1170@trotter.usma.edu> bill@trotter.usma.edu (Bill Gunshannon) writes:
> ... The people asking for a Personal Digital Radio Service
>don't want to be hams. They have no interest in ham radio and probably the
>most important idea being missed here is that what they want to use packet for
>would be illegal over amateur radio. Take a look at what is on the various
>phone BBS's. They are loaded with shareware, for sale ads, and advertisements
>for various commercial products. All things definitely out of place on amateur

Right. Two Comments...
First, that is EXACTLY why I would like to see a personal packet
network using some frequencies other than amateur. There are LOTS of
things that I can legally talk about on CB that I can't talk about
on amateur radio such as business communications, etc...
In fact, one probably couldn't read most of these articles on an amateur packet
channel due to their contents.

Secondly, the reason that I proposed CB channels instead of some NEW
set of channels, is that it is very unlikely that any new VHF/UHF
channels are available for a public packet network. I would prefer
the top part of CB being taken for packet, instead of the top part
of 6 meters.

Matthew Kaufman, KA6SQG
(matthew@ucsck.ucsc.edu) (...!ucbvax!ucscc!ucsck!matthew)

p.s. I started this discussion about allowing packet on CB...
please don't tell me to go out and
get a ham license... I already have one. Thank You.

108. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-26 07:46:06 UTC
From: sorgatz@ttidca.TTI.COM
Message-ID: <2005@ttidca.TTI.COM>
Source record: 19797
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <1170@trotter.usma.edu> bill@trotter.usma.edu (Bill Gunshannon) writes:
>
>I agree with the comments in this reply except for one. And this seems to be
>..... The people asking for a Personal Digital Radio Service
>don't want to be hams. They have no interest in ham radio and probably the
>most important idea being missed here is that what they want to use packet for
>would be illegal over amateur radio. Take a look at what is on the various
>phone BBS's. They are loaded with shareware, for sale ads, and advertisements
>for various commercial products. All things definitely out of place on amateur
>radio.

Real good. *NOW* we come to the crux of the matter.

1) NOT INTERESTED IN AMATEUR RADIO.
2) COMMERCIAL INTERESTS THAT PRECLUDE THE USE OF SAME

Sounds like what these guys need is a telephone, huh? What they're asking for
is all the flexibility of Amateur without those nasty restrictions, tough.
Until some astronomical occurance, this is not gonna happen. The use of
radio spectrum, as an experimenters hobby-zone is defined as Amateur Radio
Service, what they want is Commercial or Fixed Service. BTW: It usually costs
more than a telephone. And has some nasty restrictions about not competing
with the telephone system, etc.

>I believe it was hams who pioneerd such technological breakthrus like SSB,
>FM, and REPEATERS. These ideas have since proven their value in the commercial
>world and are now considered just a part of the world we live in. The time has
>come for packet to take it's place in the world too. There is no reason why,
>in a few years, it can't be commonplace for there to be a packet box hooked up
>to the PC in every house. Maybe this is the technology it will take to finally
>bring services like TELETEXT into the home.

Yeah, right. Well, why not just get a cell-phone portable @ 800 Mhz and plug
in your modem, plug in your P.C. and wail??!!! Or is the real point here the
cost of doing exactly that?? The breakthrus that opened shortwave were indeed
pioneered by Amateurs, in fact the whole spectrum from 200 meters down was
ours at one time. The commercial interests put their stations into the HF
bands ILLEGALLY! No fines were issued, noone went to jail tho...typical of
the political machine to "sell off" something they don't own or have already
"given" rights to...without recompensation. Absurd. Hey, if a cellular fone
is too expensive, I guess they'll just have to rely on the twisted-pair, huh?
Teletext is already in a lot of homes, via the phone lines, you don't need
packet radio for that; it's a commercial service provider, and you pay for
such things. At least according to the current FCC regs. Hell man, we can't
order a pizza via auto-patch! Why should unlicensed individuals be exempted

from the spirit of the laws?? Go ahead, explain.
>
>Any comments on this diatribe will be accepted.
>(I have my NOMEX underwear on :-)

Nahh, come on OM, we're all in this together; besides I used up my monthly supply of <<FLAMES!>> on those CB nerds! ;-) The fact is the telephone Co. monopoly precludes such things, the Amateur's are not gonna let one Hz of bandwidth get sucked-up for such stuff, and the CB community would start tearing 27 Mhz packet-ops a new rectum the first time they heard a BRAZAPPP! -it's a no-win proposition! The real stickler is the commercial interests on the dial-up BBS's, this has no place in a hobbyist-radio service, licensed or not..unless...you wanna open a bigger can of worms...and start looking at (DRUM ROLL PLEASE!):

P A Y C B....! UGH, shades of GMRS! (spatooie!)

The BBS interests that offer products for profit would then be taxed at some horrible rate to offset the public-trust of being allocated spectrum space..just like the telephone company..oops! What about that? Is Ma Bell (and those 6.02 x 10EE23 de-monopolized locals) gonna stand for such a run for their money?? The answer is (MAY I HAVE THE ENVELOPE?): "not bloody likely!". So, you see, the interests against such things as this are mostly the commercial status-quo, the Amateur community is almost a "friend" by comparison! ;-)
--
-Avatar-> (aka: Erik K. Sorgatz) KB6LUY +-------------------------+
Citicorp(+)TTI *----------> panic trap; type = N+1 *
3100 Ocean Park Blvd. (213) 450-9111, ext. 2973 +-------------------------+
Santa Monica, CA 90405 {csun,philabs,randvax,trwrb}!ttidca!ttidcb!sorgatz **

109. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-02-26 17:58:16 UTC
From: ard@pdn.UUCP
Message-ID: <2341@pdn.UUCP>
Source record: 19798
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

In article <321@upvax.UUCP>, stevewa@upvax.UUCP (Steve Ward) writes:
> I don't know
> how quickly the power of the microwaves decreases with distance (probably
> expotential) ...
> Steve Ward stevewa@upvax.UUCP

Probably inverse square

110. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-27 02:38:52 UTC
From: byrnes@ge-dab.GE.COM
Message-ID: <1037@ge-dab.GE.COM>
Source record: 19799
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <1960@ttidca.TTI.COM> sorgatz@ttidcb.tti.com (Erik Sorgatz - Avatar) writes:
>In article <1175@ucdavis.ucdavis.edu> ccs016@deneb.ucdavis.edu.UUCP (Patrick Tully pstully@ucdavis) writes:
> Why not look at the ARRL Long Range Prediction charts? Real Radio Scientists
>have spent years developing this stuff, it might surprise you..and BTW most
>of the rumor-legends of CB are vaporware, this is another case of same.
>
>> This experimenting was done on Side band using a 3 beamed yagi, horizontal.
>
> "Side band"??? "a 3 beamed yagi, horizontal"?? Would you mind explaining
>these strange terms? Yagi's *are* beams. Some have 3 elements...these are

>read my posting to that other technotwit on 'sci.electronics', there isn't
^^^^^^^^^
I think that your comments to Mr. Tully are childish and uncalled for.
It is attitudes like your's that turn many potential Hams away from the
hobby. All of the terms that Patrick used are acceptable in everyday
conversation and are heard on the ham bands daily. Had he been writing
a term paper or thesis, then the flames would be vaild, but this group
is informal (remember REC.ham-radio ?).
I think that a posted apology is in order.

>or perks to the 11 meter crowd, so grow up! Get into real radio...
Good Advice!^^^^^^^^
Reread his message ^^^^^^^^^^^^^^
from the text of Patrick's message it seems that he and his group
are "into real radio" they get out of it what they want, and that
is the most important part of any hobby.

>-Avatar-> (aka: Erik K. Sorgatz) KB6LUY +-------------------------+

Past President Daytona Beach Amateur Radio Asoc. Arthur J. Byrnes KA4WDK
UUCP: ...!mcnc!ge-rtp!ge-dab!byrnes General Electric
GEnet: advax::byrnes 1800 Volusia Ave, Rm 4412
Voice: +1 904 258 2507 Daytona Beach, FL 32015

Disclaimer; These views are those only of the author, Arthur.

111. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-28 00:20:24 UTC
From: jbn@glacier.STANFORD.EDU
Message-ID: <17327@glacier.STANFORD.EDU>
Source record: 19800
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

Looking out the window at the overcast, a thought comes to me.
Diffuse infrared systems have been built that work quite well indoors,
bouncing the signal off ceilings and walls so that line of sight is
not required. Why not try diffuse infrared off the cloud deck as a
scheme for short-range outdoor communications? Ranges of a few blocks
might be possible. One could extend this with repeaters. There would
be fading during good weather conditions, but in areas with smog and haze,
the atmosphere may never be transparent enough to prevent operation.

Laser safety standards should not be a problem, since the beam is
diffused very widely and the peak energy per unit area, the regulated quantity
for lasers, will thus be very low. Detection will require heavy filtering,
both optical and electronic, but with narrow-band optical interference
filters, negative s/n ratio modulation techniques, and packet error
correction, communication should be possible.

Incidentally, all the necessary optical components, including
interference filters, are available from Edmund Scientific.

No FCC licence is required for "blinking light signals", of course.

John Nagle

112. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-28 00:20:42 UTC
From: henry@utzoo.uucp
Message-ID: <1988Feb28.002042.10339@utzoo.uucp>
Source record: 19801
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

> ... There is no reason why, in a
> few years, it can't be commonplace for there to be a packet box hooked up
> to the PC in every house...

Actually, yes there is: choose a reasonable set of assumptions about how many such boxes there are and how much traffic each one sends, and then ask yourself how much spectrum space is necessary for this! Don't forget the desire for both interactive use, i.e. low and relatively constant latency, and fast bulk transmission. Then ask yourself whether there is any reasonable part of the spectrum with that much free space. Nope.

Moreover, this is a silly way to do things. Radio is ideal for mobile communications and broadcasting; using it as a substitute for wires between two fixed points in a metropolitan area is dumb, not to say wasteful. You can already buy a box which has many of the desired properties and needs no spectrum space whatsoever! It's called a Telebit Trailblazer, and it gets 14kbps over normal phone lines. If you believe the ISDN enthusiasts, even this is small potatoes compared to what will be available soon.

There is, actually, reason for interest in packet radio links of this kind. Not for computers in houses, but for laptops and their fancier successors (e.g. the fabled Dynabook). Unfortunately, such systems tend to want even more spectrum, and it just isn't available. What we may end up doing is using broadcast optical (infrared) communications, which works fine at short ranges in suitably-equipped areas. If your Dynabook works in your dorm room, in the library, in the study halls, and in the classrooms (or non-academic equivalents of the above), it will be less important that it won't work -- or at least won't talk to the outside world at high speed -- from the beach.

--

Those who do not understand Unix are | Henry Spencer @ U of Toronto Zoology
condemned to reinvent it, poorly. | {allegra,ihnp4,decvax,utai}!utzoo!henry

113. Infrared communication (Was: low power license free packet?)

Newsgroup: rec.ham-radio
Date: 1988-02-29 14:28:17 UTC
From: sfq@bcd-dyn.UUCP
Message-ID: <1004@bcd-dyn.UUCP>
Source record: 19802
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <17327@glacier.STANFORD.EDU>, jbn@glacier.STANFORD.EDU (John B. Nagle) writes:
> No FCC licence is required for "blinking light signals", of course.

Wrong. Amateur radio has "all above" a certain frequency, which includes
infrared, visible, ultraviolet, and gamma-ray light.

Often wondered if light bulbs needed CW identifiers.

--
Stanley F. Quayle UUCP: cbosgd!osu-cis!bcd-dyn!sfq
(614) 424-4052 USPS: 505 King Ave., Columbus, OH 43201
N8SQ @ W8CQK Fido: Stanley Quayle, Node 1:226/610
My opinions are mine. What more of a disclaimer could you need?

114. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-02-29 16:02:30 UTC
From: cgs@umd5.umd.edu
Message-ID: <2382@umd5.umd.edu>
Source record: 19803
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <2114@saturn.ucsc.edu> matthew@ucsck.UCSC.EDU (Matthew Kaufman, KA6SQG) writes:
<In article <1170@trotter.usma.edu> bill@trotter.usma.edu (Bill Gunshannon) writes:
<< ... The people asking for a Personal Digital Radio Service don't want to
<< be hams. ...

< ... Secondly, the reason that I proposed CB channels instead of some NEW
< set of channels, is that it is very unlikely that any new VHF/UHF
< channels are available for a public packet network. I would prefer
< the top part of CB being taken for packet, instead of the top part
< of 6 meters.

Whazzamadderwit 900 MHz? Why wouldn't the Cellular Radio folks like to provide
a new service and source of revenue for the companies involved ?
Any reason why the FCC would be against it ?
--
--==---==---==--
.. the vorpal blade went snicker-snack! ..
ARPA: cgs@umd5.UMD.EDU BITNET: cgs%umd5@umd2
UUCP: ..!uunet!umd5.umd.edu!cgs

115. Re: Infrared communication (Was: low power license free packet?)

Newsgroup: rec.ham-radio
Date: 1988-03-01 01:56:06 UTC
From: jbn@glacier.STANFORD.EDU
Message-ID: <17329@glacier.STANFORD.EDU>
Source record: 19804
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

The FCC lost that one in court some years back, I think. In the late 1960s, when the first laser data links were being set up in Cleveland, the people involved looked into this and discovered that the FCC had lost a case involving "blinking light signals" some time before. Lasers are regulated by the Consumer Product Safety Commission.

John Nagle

116. Spread Spectrum

Newsgroup: rec.ham-radio
Date: 1988-03-01 17:06:12 UTC
From: guest@hyper.UUCP
Message-ID: <1474@hyper.UUCP>
Source record: 19805
Cross-posted to: rec.ham-radio,sci.electronics

I think I can demonstrate the whole concept of spread spectrum stealthiness with the following simple BASIC program:

```
Input "Value to be sent";V
Input "Number of bands used";B
Vx=V/B
R=0
For J=1 to B
R=R+Vx+(1-RND(0)*2)
Next J
Print "Value received =";R
Print "Signal power in each band =";Vx
End
```

As you can see, the signal V has its energy distributed at B points with strength Vx. Vx is superimposed on the pre-existing random noise (here confined to a range of + and - 1) at each point J in B.

As long as Vx is not too far below +and- 1, and there are sufficient bands, the random noise tends to cancel, leaving the original signal R, which is correlated here by simple addition.

There is no need, however, to have the bands evenly spaced. In fact the spacing of the bands should be a changing function. Any other stealth xmitter would, in all probability, be using a different band spacing function at any given time. Thus there is no interference because there is no correlation. Correlation is the key to reception, interference and detection.

So if the signal (in its discrete components) looks like noise, tastes like noise and feels like noise (to an uninformed receiver) then it must be noise. You can claim you have detected it, but I think not.

John Logajan umn-cs!hyper!ns!logajan
Network Systems Corp
7600 Boone Ave
Brooklyn Park, MN 55428

117. Re: CB is a sewer (was: Re: low power license free packet?)

Newsgroup: rec.ham-radio
Date: 1988-03-01 17:25:22 UTC
From: kmd@sdcsmb.sm.unisys.com
Message-ID: <745@sdcsmb.sm.unisys.com>
Source record: 19806
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

In article <5102@sdcrdcf.UUCP> faigin@sdcrdcf.UUCP (Daniel P Faigin) writes:
>In article <1943@ttidca.TTI.COM>, sorgatz@ttidcb.tti.com (Erik Sorgatz) writes:
>>CB radio is a sewer, the majority of CB
>>users are braindead, burntout Kids that have so little to do with their
>>miserable lives they congragate around the 11 meter band hoping for any
>>kind of amusement.
>
>I am a member of a CB club based in the San Fernando Valley
>(Greater Los Angeles), California. The legal name of this club
>is "Valley CBers Inc." -- informally it is called the "Over the
>Hill Gang". The purpose of this club is threefold:
>
> 1) to exchange traffic information on the I-405 freeway
> during rush hours -- this benefits not only club members but
> others who monitor channel 14 (the channel the club uses).
> This is a form of SERVICE.
>
> 2) to perform a SAFETY service, by notifying base
> stations (either REACTS or club members with base stations or
> cellular telephones) of traffic accidents that do not have police
> or ambulances on the scene.
>
> 3) to provide a SOCIAL outlet for club members -- garage
> sales, hayrides, picnics, spagetti dinners, etc.
>
>The club has over 200 members, I think. The occupations of these
>members range from professionals such as lawyers or engineers to
>auto mechanics to small business owners to ... you name it.
>
>Daniel Faigin --- "Otherbeast" --- OTHG Channel 14

As another member of the "Over the Hill Gang", I thought I would add
my $0.02 to this discussion. I do a *lot* of work-related driving for
my job, alone. So does my mom. I can get help anywhere on the LA freeways
a *lot* faster by using my rig than by getting to the "one every 1/4 mile
call box" on the freeways. I know which channels the twits are on, and
where the serious drivers are. I have saved much time and aggravation
by getting traffic reports from other OTHG members on the 405-corridor
(one night, it saved me at least 45 minutes -- someone told me not to
get on the freeway at my normal spot -- I didn't -- and he was still
several miles back by the time I got home), and from truckers on many of the
other routes that I travel (being a lone female *does* have a few
advantages when it comes to dealing with MCPs ;-).

I enjoy the social aspects of the club, and the traffic reports help. Last week, we called someone on a base to get a hazardous driver removed from the road. The CHP know us, and when we call in, they respond. I also discovered (by accident) one morning that LAPD regularly monitors OTHG reports -- seems that someone we know as K9 is actually the human half of an LAPD K-9 unit (with police band back-up). Would the LAPD and CHP regularly respond to the rantings of a bunch of "brain-dead kids"? I sincerely doubt it.

One other question for those of you who hate CB so much: what would you say about those of your own (hams) that use CBs? I know several members of the OTHG who regularly use Channel 14 until they get close enough to hit the Valencia 3m repeater with their low-power mobiles (T.O.M., where are you when we need you?)

Karen Davis -- "Silver Lady" -- OTHG Channel 14

--
Email: kmd@sdcrdcf.UUCP (uucp) kmd@RDCF.SM.UNISYS.COM (arpa)
Work : UNiSYS/DS/System Development Group; 2400 Colorado; Santa Monica CA 90406 (213) 829-7511 x6295
Home : 8333 Columbus Avenue #17; Sepulveda CA 91343

118. Re: Robocop spotted (Photo radar enforcement)

Newsgroup: rec.ham-radio
Date: 1988-03-01 18:25:17 UTC
From: carl@aoa.UUCP
Message-ID: <115@aoa.UUCP>
Source record: 19807
Cross-posted to: sci.electronics,rec.ham-radio,rec.autos

```
In article <2341@pdn.UUCP> ard@pdn.UUCP (Akash Deshpande) writes:
>In article <321@upvax.UUCP>, stevewa@upvax.UUCP (Steve Ward) writes:
>> I don't know
>> how quickly the power of the microwaves decreases with distance (probably
>> expotential) ...
>> Steve Ward stevewa@upvax.UUCP
>
> Probably inverse square
It's like any other E-M field: inverse square if point source, all
sorts of interesting decay if not.

--

Alix's Dad ( Carl Witthoft @ Adaptive Optics Associates)
{ima,harvard}!bbn!aoa!carl
54 CambridgePark Drive, Cambridge,MA 02140 617-864-0201
"People unclear on the concept: 'Nah, I don't want to windsurf,
I wanna do more C-programming.' "
```

119. Re: Spread Spectrum

Newsgroup: rec.ham-radio
Date: 1988-03-02 18:03:41 UTC
From: paulf@umunhum.STANFORD.EDU
Message-ID: <148@umunhum.STANFORD.EDU>
Source record: 19808
Cross-posted to: rec.ham-radio,sci.electronics

I missed your reply to my first message, but it's clear that you don't have
a fundamental grasp of Shannon's Law; Spread Spectrum raises the noise
floor across the communication passband, and that increase in noise can
be detected.

The BASIC simuation that you've proposed is invalid for a number of reasons,
not limited to:

1. The BASIC RND function is uniform; to model a radio channel,
one needs Gaussian noise, plus impulse noise, plus Rayleigh fading
on the signal.

2. No statistical test is proposed to separate the spreading code
and the noise; however, even in the case that you have given,
it can be shown statistically that the resultant is not uniformly
distributed, and therefore a signal exists on top of the noise.

Certainly, spread spectrum is less detectable than a narrowband signal, but
to claim that it is next to impossible to detect is foolish.

-=Paul Flaherty, N9FZX |
Computer Systems Laboratory | "panic: getfs: bad magic"
Stanford University |
->paulf@shasta.Stanford.EDU | --4.3bsd Unix

120. Re: low power license free packet?

Newsgroup: rec.ham-radio
Date: 1988-03-06 04:30:39 UTC
From: henry@utzoo.uucp
Message-ID: <1988Mar6.043039.1949@utzoo.uucp>
Source record: 19809
Cross-posted to: rec.ham-radio.packet,rec.ham-radio,sci.electronics

> ... Why not try diffuse infrared off the cloud deck as a
> scheme for short-range outdoor communications? ...

Those of us in urban settings can also use diffuse infrared off tall
buildings (artificial clouds!). At one point I seriously thought of
trying this as a way to get a fast link between my home and work, but
the combination of having moved to a less favorable location and having
acquired a Telebit Trailblazer has made me shelve the idea for now.
--
Those who do not understand Unix are | Henry Spencer @ U of Toronto Zoology
condemned to reinvent it, poorly. | {allegra,ihnp4,decvax,utai}!utzoo!henry

121. Television Data Transmission

Newsgroup: rec.ham-radio
Date: 1988-03-15 15:25:06 UTC
From: snyderw@pawl18.pawl.rpi.edu
Message-ID: <533@imagine.PAWL.RPI.EDU>
Source record: 19810
Cross-posted to: sci.electronics,rec.ham-radio

Hello, I would like to know if it is possible to make a very
low power television transmitter. Here's the catch, it needs to fit
into a HO Scale model railroad boxcar (About 2" by 5" by 5").
The data does not need to be transmitted onto the standard broadcast band,
nor does the format need to be standard. Of course, if it is not a receiver
is needed. I plan to use a small Semiconductor Imags sensor for the input,
so the input could be digital (???). Finally, color is needed.
Any help would be welcome. (The radio signal only needs to make it
ten feet or so.)

Wilson P. Snyder II beowulf!lunge!snyderw@steinmez.UUCP
318 Crockett Hall, RPI (uunet!steinmez!bewulf!lunge!snyderw)
Troy, NY 12180-3590 (518) 276-7189, or (802) 658-3799 if summer
----

122. Re: Television Data Transmission

Newsgroup: rec.ham-radio
Date: 1988-03-16 15:10:17 UTC
From: garnett@batcomputer.tn.cornell.edu
Message-ID: <4063@batcomputer.tn.cornell.edu>
Source record: 19811
Cross-posted to: sci.electronics,rec.ham-radio

In article <533@imagine.PAWL.RPI.EDU> snyderw@pawl18.pawl.rpi.edu (Wilson P. Snyder II) writes:
>
> Hello, I would like to know if it is possible to make a very
>low power television transmitter. Here's the catch, it needs to fit
>into a HO Scale model railroad boxcar (About 2" by 5" by 5").
>is needed. I plan to use a small Semiconductor Imags sensor for the input,
>so the input could be digital (???). Finally, color is needed.
> Any help would be welcome. (The radio signal only needs to make it
>ten feet or so.)
>
Yes! you can. There are some cheap and dirty ways to do it too. Of course
things like this are 'officially' controlled by the FCC...
If you have a composite vidio signal (output from camera, computer, vcr,
etc), you can feed it in to a rf converter. Small, cheap rf converters can be
made with few parts (I don't have details here) but an eaiser way is to use a
converter from a vidio game, home computer, vcr, etc. Any old, dead VIC 20,
sinclair, Atari, or VCR may be a good candidate. There were even some converters
sold seperatly. You can take the output of the converter and feed it to an
antenna of some sort (wire) and pick up the result on a nearby TV.
Some rf converters are pretty amazing, Back about 15 years ago I fed
the rf output from a Sony Porta-Pac VTR into our TV antenna and then aimed the
camera at our neighbors house. I then went next door to "watch" TV. And what
do you Know, guess what was showing on channel 3? My neighbor couldn't figure
out why his house was a star...
IF you do this it helps to have channel 3 or 4 unused by a local
station, they would probubly kill your weak signal. And remember you don't
know who might be watching.
Also, you can feed audio into some converters as well as vidio.
So, a camera mounted in a model train, huh? Nice ride. I have been noticing
the increase of such subjects-eye-view cameras, in racing cars, those mad
lughe (sic?) sledders in the olympics, etc. So, remember, some where,
some time, some one may be watching, so smile! you're on candid camera...

-------- Roger Garnett (garnett@batcomputer)
/ /||^^\ \ Cornell Phonetics Lab (garnett@tcgould.TN.CORNELL.EDU)
| |\/ || _ | Ithaca N.Y. (bitnet: sggy@cornellC)
| | || | |
\ ||__/ /
------- SAFETY FAST! okbye

123. Re: Re: EPROM erasers

Newsgroup: rec.ham-radio
Date: 1988-03-16 18:39:32 UTC
From: jans@tekcrl.TEK.COM
Message-ID: <2426@tekcrl.TEK.COM>
Source record: 19812
Cross-posted to: rec.ham-radio,sci.electronics

<<Kurt>>
<Mark>

<<...Folks seem to think that seeing the UV light instantly fries your eyeballs. If so, then we'd be blind on the first sunny day. I'll just erase EPROMs this way till I need glasses...>>

<...it takes a couple of weeks to clear out an EPROM in sunlight. With my G15t8 bulb it takes 3 minutes, at the surface of the bulb. Thats a factor of 6000 to 1... These suckers are not to be taken lightly.>

My understanding is that UV damage to eyes is long term and cumulative. Kurt is right; it won't instantly "fry (his) eyeballs". However, Mark's point is that each erasing exposes you to weeks of sunlight-equivalent UV. Did you know that people (farmers, fishermen, etc.) who spend much of their time in sunlight have a much higher rate of cataract-induced blindness? Let's see if Kurt still erases EPROMS this way after his first cataract operation at age 45!

:::::: Software Productivity Technologies --- Smalltalk Project ::::::
:::::: Jan Steinman N7JDB Box 500, MS 50-470 (w)503/627-5881 ::::::
:::::: jans@tekcrl.TEK.COM Beaverton, OR 97077 (h)503/657-7703 ::::::

124. Re: Television Data Transmission

Newsgroup: rec.ham-radio
Date: 1988-03-16 21:12:51 UTC
From: paulf@umunhum.STANFORD.EDU
Message-ID: <152@umunhum.STANFORD.EDU>
Source record: 19813
Cross-posted to: sci.electronics,rec.ham-radio

A far better solution would be to wait for Lionel's TrainCam, due out some time this summer, at a cost of about $500.

-=Paul Flaherty, N9FZX |
Computer Systems Laboratory | "panic: getfs: bad magic"
Stanford University |
->paulf@shasta.Stanford.EDU | --4.3bsd Unix

125. Soviets continue microwave zapping of US embassy

Newsgroup: rec.ham-radio
Date: 1988-03-17 00:49:58 UTC
From: parnass@ihuxz.ATT.COM
Message-ID: <2690@ihuxz.ATT.COM>
Source record: 19814
Cross-posted to: rec.ham-radio,sci.electronics

x
According to an Associated Press story in the March 4
Beacon News, the Soviet Union continues to bombard the
U. S. embassy in Moscow with microwave signals.

The 9-11 GHz and 5-6 GHz signals are typically 0.01
microwatt per square centimeter inside the embassy buil-
ding, and ten times as strong outside.

The State Department protested the tactic over 4 years
ago. Current levels are lower than those in 1980, when
the microwave signals were measured at over 1.0
microwatts per square meter.

In the past, there was speculation that the Soviet radio
waves were either an attempt to induce psychological and
behavior changes among U. S. personnel, or had something
to do with bugging. [The more likely purpose is to use
the beams to excite eavesdropping devices planted within
the embassy - BP]
--
===-===
Bob Parnass, Bell Telephone Laboratories - ihnp4!ihuxz!parnass - (312)979-5414

126. Re: Television Data Transmission

Newsgroup: rec.ham-radio
Date: 1988-03-17 17:31:55 UTC
From: david@daisy.UUCP
Message-ID: <939@daisy.UUCP>
Source record: 19815
Cross-posted to: sci.electronics,rec.ham-radio

I read of an exceedingly cheap low power NTSC-to-RF converter. The
power output may be too low; I'm sure someone will post a small amp design.

The method, written in Electronics magazine a decade or so ago, is to put
NTSC signal into a TTL inverter chip. One type of inverter (LS, I think)
can't respond fast enough to the input signal, goes into it's linear
range of operation, distorts horribly (since TTL gates aren't designed to
be good linear amplifiers!), and generates the correct signal for various
TV channels.

Of course, it also generates lot of other crap too. And you can't get
audio. And I doubt color will work too well. And the resolution may not
be too great. But the cost is low.

If you blow up something, don't blame me. I never built it; I simply read
the article and was impressed by the simplicity and cleverness.

-- David Schachter

Standard disclaimer: the site I'm posting from doesn't adhere to my opinions.
"I'm not home right now. Please wait for the tone, then hang up. Thank you."

127. All-Digital Receiver

Newsgroup: rec.ham-radio
Date: 1988-03-20 19:53:02 UTC
From: awpaeth@watcgl.waterloo.edu
Message-ID: <3648@watcgl.waterloo.edu>
Source record: 19816
Cross-posted to: sci.electronics,rec.ham-radio

I am interested in homebrew (practical, not theoretical) digital component decoding/demodulation of RF carriers -- in other words, a digitally based receiver. This seems well within the reach of off-the-shelf micros for the frequencies used by long-wave carriers (commercial AM, WWVB, 160-190KHz "lowfers"). A fully digital receiver has potential for custom features, digital filtering schemes and small size and the "inner loop" software seems relatively straight-forward (no software FFT is needed as only one carrier frequency is of interest). Anyone out there with similar inclinations?

/Alan Paeth
Computer Graphics Lab
University of Waterloo, Ontario.

128. ROSE Software

Newsgroup: rec.ham-radio
Date: 1988-03-24 07:42:58 UTC
From: n2dsy@hou2d.UUCP
Message-ID: <1964@hou2d.UUCP>
Source record: 19817
Cross-posted to: comp.protocols.iso,rec.ham-radio.packet,rec.ham-radio

The Radio Amateur Telecommunications Society has several
pieces of software which we are willing to place here in both
source and executable form. We have a few questions for the
crew before we proceed.

1. We would only send it via a single distribution/newsgroup,
which one ?

2. Since binary is not acceptable what form is most welcome ?
(we have been thinking of the PC BTOA programme if it is
popular. Should we use a UNIX utility ?)

3. We will also post the DOCUMENTATION...should we pack it up
or since it isn't too large just post each file ?

4. Is there any demand for the source ?

Comments anyone ?

By the way, the mailing has started to flow out the door...
We would like to post the stuff here to help distribute the
software more rapidly.

Thanks,
J. Gordon Beattie, Jr.
E-mail: ihnp4!hou2d!n2dsy (Unix) n2dsy@kd6th.a3100201.ampr
Telephone: 201-615-4168 (Office) 201-615-4669 (Office FAX)
Telephone: 201-387-8896 (Home)

129. Re: ROSE Software

Newsgroup: rec.ham-radio
Date: 1988-03-25 06:03:22 UTC
From: rusty@hodge.UUCP
Message-ID: <147@hodge.UUCP>
Source record: 19818
Cross-posted to: comp.protocols.iso,rec.ham-radio.packet,rec.ham-radio

We would appreciate having the source posted in plain ascii.

--
Rusty Hodge, Hodge Computer Research Corp, Orange, CA 92667 (714) 974-6300
rusty@hodge.cts.com [ccicpg!arnold, crash]!hodge!rusty FAX (714) 921-8038
uucp: (714) 921-1090 (login: nuucp) Dial-A-Joke (714) 966-0976

130. Re: ROSE Software

Newsgroup: rec.ham-radio
Date: 1988-03-25 16:11:32 UTC
From: rec@mplvax.nosc.MIL
Message-ID: <738@mplvax.nosc.MIL>
Source record: 19819
Cross-posted to: comp.protocols.iso,rec.ham-radio.packet,rec.ham-radio

In article <1964@hou2d.UUCP> n2dsy@hou2d.UUCP (G.BEATTIE) writes:
>
>4. Is there any demand for the source ?

By all means post sources please.

--
richard currier marine physical lab u.c. san diego
rec@mplvax.nosc.mil
{ihnp4|decvax|akgua|dcdwest|ucbvax} !sdcsvax!mplvax!rec

131. Re: ROSE Software

Newsgroup: rec.ham-radio
Date: 1988-03-25 18:29:44 UTC
From: tech@auvax.UUCP
Message-ID: <579@auvax.UUCP>
Source record: 19820
Cross-posted to: comp.protocols.iso,rec.ham-radio.packet,rec.ham-radio

From article <1964@hou2d.UUCP>, by n2dsy@hou2d.UUCP (G.BEATTIE):
> 4. Is there any demand for the source ?
>
> Thanks,
> J. Gordon Beattie, Jr.
> E-mail: ihnp4!hou2d!n2dsy (Unix) n2dsy@kd6th.a3100201.ampr
> Telephone: 201-615-4168 (Office) 201-615-4669 (Office FAX)
> Telephone: 201-387-8896 (Home)

I personally prefer source because that way it can be adapted to various machines and various other oddities. A lot of times I find source easier to understand than documentation. Besides I was born and raised on UNIX version 6, I love source.

********* 73
********** Richard Loken VE6BSV
. ****
.. **** Athabasca University
.... **** Athabasca, Alberta Canada
..........**** ihnp4!alberta!auvax

132. Looking for dialup/accessable BBS oriented to h/w topics

Newsgroup: rec.ham-radio
Date: 1988-03-30 00:03:43 UTC
From: tac@sei.cmu.edu
Message-ID: <4787@aw.sei.cmu.edu>
Source record: 19821
Cross-posted to: comp.binaries.ibm.pc,comp.sys.ibm.pc,comp.sys.intel,rec.ham-radio,sci.electronics

I'd like to hear from anybody who has any information on public
Bulletin Board System that I can access (dialup, or network) that
are hardware oriented (ie might have PD software, or users oriented
to h/w), anywhere in the country. All I need is enough
information to make contact. Please respond by e-mail

Thanks Tim Coddington
arpa: tac@sei.cmu.edu
bitnet: tac%sei.cmu.edu@uma.cc.cmu.edu
csnet: tac%sei.cmu.edu@relay.cs.net

412-268-7712

133. PRO-2004

Newsgroup: rec.ham-radio
Date: 1988-04-07 20:21:44 UTC
From: ewb@raybed2.UUCP
Message-ID: <1156@raybed2.UUCP>
Source record: 19822
Cross-posted to: rec.ham-radio,sci.electronics

According to the latest (April 88) issue of Monitoring Times there is yet another modification to the Radio Shack PRO-2004 scanner. Apparently, by removing another diode (presently un-named), coverage of the 550 MHZ to 770 MHz band can be restored. I don't know who would would want to listen there as it's only a TV band, but according to the mag, it will be available. Monitorong Times is trying to verify the story and will print directions in an upcomming issue. Good Listening
Gene
WA1UXA

134. Re: PRO-2004

Newsgroup: rec.ham-radio
Date: 1988-04-09 05:34:00 UTC
From: die@frog.UUCP
Message-ID: <2168@frog.UUCP>
Source record: 19823
Cross-posted to: rec.ham-radio,sci.electronics

In article <1156@raybed2.UUCP> ewb@raybed2.UUCP (EUGENE BALINSKI) writes:
>
> According to the latest (April 88) issue of Monitoring Times there is yet
>another modification to the Radio Shack PRO-2004 scanner. Apparently, by
>removing another diode (presently un-named), coverage of the 550 MHZ to 770 MHz
>band can be restored.

It is possible that there is some way of making the microprocessor accept frequencies in this range and perhaps even set up the VCO PLL dividers correctly, but the radio's front end has no bandpass filter for this range and the tuning range of the first LO VCO as discussed in the alignment procedure for the 2004 doesn't go low enough.

I suspect that the very best one could do by fiddling the VCO adjustments so it would lock lower in frequency (and yet not drop lock at the 1300 mhz end) is to go a 100 mhz or so below the current 750 mhz lower limit with reduced sensitivity.

I am sure a RF hacker with the right equipment could fiddle the front end to make it work (a varacter UHF TV tuner with RF amp (some exist that actually have one or two stages of RF amplification) might serve pretty well as the front end RF section) - and substituting a hyper-abrupt junction varacter for the VCO tuning varacter might make the VCO tune low enough. Of course there are probably going to be spurious problems at the first IF at 608-612 mhz and the 2nd LO (550 mhz).

I will have to look at the service manual again. In general it is useful to be able to tune a scanner slightly out of band (IE override its internal limits) if the PLL dividers will cooperate. If anybody knows the diode involved I'd be curious.

On another PRO-2004 topic, I have been playing around with my 2004 with low phase noise (I hope) signals from a precision low phase noise (FLUKE 6160) VHF synthesizer multiplied to 800 mhz (part of a stable C band satellite down converter lashup) and I find that it's LO's seem pretty noisy (ultimate FM quieting on a strong CW signal isn't that impressive at 800 mhz) I don't think it noise from my multiplier or the synthesizer either.

David I. Emery
Charles River Data Systems
983 Concord St.
Framingham, MA 01701
Tel: (617) 626-1102
uucp: ...!decvax!frog!die

135. Re: PRO-2004

Newsgroup: rec.ham-radio
Date: 1988-04-11 17:12:11 UTC
From: jack@csccat.UUCP
Message-ID: <404@csccat.UUCP>
Source record: 19824
Cross-posted to: rec.ham-radio,sci.electronics

Here is a re-post of the article posted last year.

-Jack

From: mgrant@MIMSY.UMD.EDU (Michael Grant)
Newsgroups: mod.telecom
Subject: Restoring Cellulsr Coverage on the Radio Shack PRO-2004 Scanner
Message-ID: <8703162343.AA08357@mimsy.umd.edu>
Date: 16 Mar 87 23:43:38 GMT
Distribution: world
Organization: The ARPA Internet
Lines: 32
Approved: telecom@xx.lcs.mit.edu

In the March 1987 (Vol 6, Number 3) issue of Monitoring Times on page 48,
there is a short article on how to modify your RadioShack Scanner to
pick up the cellular frequencies. (This just had to have been leaked
from someone in Tandy sales!)

1. Remove the four cabinet screws and the cabinet

2. Turn the receiver upside down and locate circuit board PC-3

3. Remove seven screws holding board and plug CN-501

4. Carefully lift up the board and locate diode soldered in place below the
module
{In the large article, it mentions "a matrix of diodes attached to the
microprocessor's input port, which is often used to configure radios
for sale in different markets. From recent flux on the circuit board,
it appears that a diode had been added/removed", this is the diode in
question.}

5. Snip one lead of the diode carefully, leaving it suspended by the other
lead for later reattachment if desired, such as warranty repair

6. Reverse first four steps above for reassembly. Radio will now cover
825-845 and 870-890 MHz and search in 30 KHz increments for no-gap
760-1300 MHz reception

(Thanks to Jim Marquand and other readers of Monitoring Times)

I do not own a PRO-2004, nor have I ever seen this tried, do it at your
own risk.

-Mike

--
See above (214)661-8960

136. LORAN C

Newsgroup: rec.ham-radio
Date: 1988-04-11 22:15:29 UTC
From: dsp@oakhill.UUCP
Message-ID: <1195@oakhill.UUCP>
Source record: 19825
Cross-posted to: rec.ham-radio,sci.electronics

I recently purchased a used TI 9900 LORAN-C receiver. I would like to procure the schematics for this beast. Is anyone out there familiar with this receiver?? The thing is not tracking the Loran stations at all....even though the receiver output shows the GRI pulses. A source for schematics or advice would be greatly appreciated.

Charlie Thompson
(512) 892-6161
Austin, TX

137. 6502 crystal clock

Newsgroup: rec.ham-radio
Date: 1988-04-15 02:03:23 UTC
From: gordo@athena.mit.edu
Message-ID: <4641@bloom-beacon.MIT.EDU>
Source record: 19826
Cross-posted to: sci.electronics,rec.ham-radio

I'm working on a small (VERY small) microcomputer control board to do things like convert morse code and RTTY to RS-232 serial as well as FAX to printer codes. Yes, I do realize that such devices are commercially available, but it seems more fun this way. I currently use a $30 VIC-20 to do these (well, not the fax). Anyway, it looks something like:

6502 microprocessor
8 K RAM/ROM (I'll probably use a battery-backed RAM cartridge that would be used for both the program and data storage. It would be mapped at both $0000 hex (for page-0 addressing ops and stack use) as well as at the top 8K of memory (for reset vectors))
6522 VIA for printer output, demodulator input, timer
one LSTTL IC to decode the memory (probably a quad XOR; it works out well for the ghost image of the RAM at the top of memory.)

Anyway, right now I'm looking at using a crystal clock oscillator instead of a crystal and some gates. However, I've seen it hinted that you can hook a crystal directly to the 6502 and get it to oscillate. Does anyone have anything on this; I have never seen anything concrete?

138. Ringer Magneto Wanted

Newsgroup: rec.ham-radio
Date: 1988-04-15 13:14:06 UTC
From: rib@mhuxt.UUCP
Message-ID: <2384@mhuxt.UUCP>
Source record: 19727
Cross-posted to: sci.electronics,rec.ham-radio,att.ham-radio,att.wanted

I'm looking to acquire a "ringer" magneto (the kind of hand-cranked
A-C generator once employed to generate the ringing voltage on
field phones.

Has anybody seen one of these advertized by a surplus outfit?
Once, these were common items from rural phone modernizations
and surplused military field phones, but I haven't seen one
in some years.

Oh, by the way, the reason I want one is to make a worm gathering aid.

139. Understanding scrambled speech without a descrambler

Newsgroup: rec.ham-radio
Date: 1988-04-17 12:53:01 UTC
From: parnass@ihuxz.ATT.COM
Message-ID: <2760@ihuxz.ATT.COM>
Source record: 19728
Cross-posted to: rec.ham-radio,sci.crypt

x
The discussion of copying RTTY by ear is interesting, and
I've often thought about such things.

One of my favorite daydreaming topics is how humans might
develop the ability to understand scrambled speech,
without using a descrambler. I'm talking here about
speech inversion type scrambling, not digital voice
encryption, or time domain rolling code scrambling.

Could this ability be developed in a child raised (from
infancy) by parents and teachers who communicate only
through use of a speech inversion scrambler?

I've been able to understand SSB transmission fragments
without a product detector. However, this is probably
due to the cadence and context (e.g., recognizing someone
calling CQ is much easier than understanding an operator
describing the weather).

--
===-===
Bob Parnass AJ9S - AT&T Bell Laboratories - ihnp4!ihuxz!parnass - (312)979-5414

140. Re: Ringer Magneto Wanted

Newsgroup: rec.ham-radio
Date: 1988-04-18 15:57:00 UTC
From: tedk@ihuxv.ATT.COM
Message-ID: <2587@ihuxv.ATT.COM>
Source record: 19729
Cross-posted to: sci.electronics,rec.ham-radio

In article <2384@mhuxt.UUCP> rib@mhuxt.UUCP (Robert I. Block) writes:
>I'm looking to acquire a "ringer" magneto (the kind of hand-cranked
>A-C generator once employed to generate the ringing voltage on
>field phones.
>
>Has anybody seen one of these advertized by a surplus outfit?

American Science Center, 5?00 North Northwest Highway, Chicago IL.
This store is just like Edmond Science. I have seen the Magneto
hand cranked generators there. As I remember, they are expensive.
There is another store directly next door that sells military surplus.
I think the name is "Jimco" or "Jamesco".

Ted G. Kekatos
backbone!ihnp4!ihuxv!tedk (312) 979-0804
AT&T Bell Laboratories, Indian Hill South, IX-1F-460
Naperville & Wheaton Roads - Naperville, Illinois. 60566 USA

141. Re: Ringer Magneto Wanted

Newsgroup: rec.ham-radio
Date: 1988-04-18 17:02:55 UTC
From: dmt@ptsfa.PacBell.COM
Message-ID: <4249@ptsfa.PacBell.COM>
Source record: 19730
Cross-posted to: sci.electronics,rec.ham-radio

In article <2384@mhuxt.UUCP> rib@mhuxt.UUCP (Robert I. Block) writes:
>I'm looking to acquire a "ringer" magneto (the kind of hand-cranked
>A-C generator once employed to generate the ringing voltage on
>field phones.
>
Edmund Scientific and Herbach & Rademan, Inc both have them.

H & R's address is:

Herbach & Rademan, Inc.
401 East Erie Ave.
Philadelphia, PA 19134
215-426-1708

Ask for their "This Month" catalog.

The price is about $20.00 from each.

--
Dave Turner 415/542-1299 {ihnp4,lll-crg,qantel,pyramid}!ptsfa!dmt

142. RATS Open Systems Environment (ROSE) Forum at the 1988 Dayton Hamvention

Newsgroup: rec.ham-radio
Date: 1988-04-18 17:36:16 UTC
From: n2dsy@hou2d.UUCP
Message-ID: <1983@hou2d.UUCP>
Source record: 19731
Cross-posted to: rec.ham-radio,rec.ham-radio.packet,comp.protocols.iso,comp.protocols.tcp-ip,comp.protocols.misc

The Radio Amateur Telecommunications Society

206 North Vivyen Street

Bergenfield, New Jersey 07621

201-387-8896

The Radio Amateur Telecommunications Society (RATS) is proud to present

a forum at the 1988 Dayton Hamvention called:

ROSE: Open Systems Networking in the RATS Open Systems Environment

The talk will focus on the reality of Open Systems
Networking in Amateur Radio. The Society has been involved
in the development of mail/file/directory servers and
networking software based on international communications
standards.

Radio Amateurs who are telecommunications professionals or
packet radio users will find this talk especially
interesting and enlightening, but the novice networker will
have no trouble following the presentation.

* Software Distribution

Currently, the beta version of the ROSE X.25 Packet Switch
and the release of the ROSErver/Packet Radio MailBox System
are available. The Society will distribute the latest
releases of its software at the session. Bring 5-1/4 or 3-
1/2 inch diskettes for software and documentation. Remember
RATS distributes its software for free! Come and get it!

* Where to Find RATS at Dayton

Members of RATS will be present in the PAC-COMM Packet Radio
Systems booth (Booth 277/278). Members will be able to
demonstrate and copy software for you to take home and use.
Handouts describing our activities and frequencies of
operation will be distributed at the packet forum on Friday
afternoon from 1-5. We also are planning to be available
for the Packet Get-Together at McNasty's on Saturday
evening.

The RATS ROSE Forum

Time: 9:30 - 11:00

Place: ROOM 1 (check your programme to be sure)

The forum will consist of three three 30 minute talks. Each will explore an aspect of the Open Systems implemented by the Radio Amateur Telecommunications Society (RATS). Questions will be taken by each speaker.

Schedule

09:30 Review of Open Systems Networks and Protocols

- Presented by J. Gordon Beattie, Jr., N2DSY

This talk will provide an overview of a network based on Open Systems. The specific protocols and user services will be defined alone with the network management and planning dependencies found in a cooperative network.

10:00 The ROSE X.25 Packet Switch

- Presented by Thomas A. Moulton, W2VY

This talk will concentrate on the OSI Network Services and how the ROSE X.25 Switch will support the users of "vanilla" AX.25, OSI Applications, TCP/IP and Net/ROM.

10:30 The ROSErver Mail, File and Directory Server

- Presented by Andrew R. Funk, KB7UV

This talk will concentrate on OSI Application Services and how the ROSErver/Packet Radio Mail Box System will provide these services to users and other systems.

143. Re: Ringer Magneto Wanted

Newsgroup: rec.ham-radio
Date: 1988-04-19 04:33:30 UTC
From: todd@uop.edu
Message-ID: <1327@uop.edu>
Source record: 19732
Cross-posted to: sci.electronics,rec.ham-radio

In article <2384@mhuxt.UUCP>, rib@mhuxt.UUCP (Robert I. Block) writes:
> I'm looking to acquire a "ringer" magneto (the kind of hand-cranked
> A-C generator once employed to generate the ringing voltage on
> field phones.

Those can be had from Fair Way Radio in Ohio.
Look in the back of an ole "Radio Electronics" mag.

> Oh, by the way, the reason I want one is to make a worm gathering aid.

Hell, just make a Tesla coil.. use a Ford coil..

Trivia of the day.. can anyone out there tell me what a

"Fletcher Phone" is?? C'mon Max.. you know??

"Never date a girl who has spurs hanging on her brass bed"

+ uop!todd@uunet.uu.net +
+ cogent!uop!todd@lll-winken.arpa +
+ {backbone}!ucbvax!ucdavis!uop!todd +
---

144. TCP/IP at Dayton and Trenton

Newsgroup: rec.ham-radio
Date: 1988-04-19 05:59:05 UTC
From: karn@thumper.bellcore.com
Message-ID: <1054@thumper.bellcore.com>
Source record: 19733
Cross-posted to: rec.ham-radio,rec.ham-radio.packet,comp.protocols.iso,comp.protocols.tcp-ip,comp.protocols.misc

The KA9Q Internet Protocol Package will also be described and demonstrated at both the Trenton Computer Festival and at the Dayton Hamvention. This package is now estimated to be in the hands of at least several thousand people around the world, and it is enjoying rapidly increasing popularity on amateur packet radio. It presently supports the following proven, industry standard protocols:

Applications:

Telnet - remote login and "chatting"
FTP - File transfer (binary or text)
SMTP - Mail transfer

Transport/Session:

TCP - Transmission Control Protocol
UDP - User Datagram Protocol

Network:

IP - Internet Protocol
ICMP - Internet Control Message Protocol

Link/Subnet:

ARP - Address Resolution Protocol
Ethernet - 3Com 3C-501 interface driver
AX.25 - packet radio (both connected and unconnected modes)
SLIP - asynchronous point-to-point links

The primary machine supported is the IBM PC (and clones). Versions are also available for the Apple Macintosh, Commodore Amiga, and UNIX System V.

The entire package, which includes complete C source code and documentation, is copyrighted by myself and others, but it is completely FREE for noncommercial use. I encourage you to make copies for your friends back home; this minimizes the number of copies I have to make.

I will bring a limited supply of copies, but bring your own blank disks if you want to be sure of getting a copy. The package fits on one high-density 1.2 meg 5.25" floppy, two 720K 3.5" floppies, or three 360K 5.25" floppies. I should be able to handle all three formats at both Trenton and Dayton.

For those of you with Internet access, you may obtain the package by anonymous FTP from louie.udel.edu (10.0.0.96) under /pub/ka9q.

73, Phil Karn, KA9Q

145. Re: TCP/IP at Dayton and Trenton

Newsgroup: rec.ham-radio
Date: 1988-04-19 15:33:59 UTC
From: nelson@sun.soe.clarkson.edu
Message-ID: <769@sun.soe.clarkson.edu>
Source record: 19734
Cross-posted to: rec.ham-radio,rec.ham-radio.packet,comp.protocols.iso,comp.protocols.tcp-ip,comp.protocols.misc

In article <1054@thumper.bellcore.com> karn@thumper.bellcore.com (Phil R. Karn) writes:
>The KA9Q Internet Protocol Package will also be described and
>demonstrated at both the Trenton Computer Festival ...
>The entire package, which includes complete C source code ...
>I will bring a limited supply of copies, but bring your own blank disks
>if you want to be sure of getting a copy. ...

I'll give Phil a few copies of my Turbo C porting kit on 5 1/4 360 K
disks.

The porting kit is updated to version 871225.18, and is on clutx.clarkson.edu
[128.153.4.3] in pub/Ka9q/kit.arc via anonymous ftp.
--
char *reply-to-russ(int network) {
if(network == BITNET) return "NELSON@CLUTX";
else return "nelson@clutx.clarkson.edu"; }

146. ICF 2003 question

Newsgroup: rec.ham-radio
Date: 1988-04-19 18:25:06 UTC
From: dsp@oakhill.UUCP
Message-ID: <1202@oakhill.UUCP>
Source record: 19735
Cross-posted to: rec.ham-radio,sci.electronics

I just bought one of those Sony ICF 2003 pll synthesized S/W receivers.
On strong SSB signals the thing seems to have an FM'ing problem. If
I collapse the antenna or set the sensitivty to low, the problem is
reduced. Has anyone out there experienced such a problem??

Thanks in advance.

Charlie Thompson
WB4HVD

147. LORAN Schematics

Newsgroup: rec.ham-radio
Date: 1988-04-19 22:12:01 UTC
From: dsp@oakhill.UUCP
Message-ID: <1203@oakhill.UUCP>
Source record: 19736
Cross-posted to: rec.ham-radio,sci.electronics

I am looking for schematics for a TI 990 model LORAN-C receiver.
I purchased an old one and want to get it working. Is anybody
out there familiar with this unit??

Thanks in advance.

Charlie Thompson

148. Re: Understanding scrambled speech without a descrambler

Newsgroup: rec.ham-radio
Date: 1988-04-20 07:52:17 UTC
From: henry@utzoo.uucp
Message-ID: <1988Apr20.075217.761@utzoo.uucp>
Source record: 19737
Cross-posted to: rec.ham-radio,sci.crypt

> One of my favorite daydreaming topics is how humans might
> develop the ability to understand scrambled speech,
> without using a descrambler...

There are instances of this on the record. In mid-WW2, Bell Labs
demonstrated that about half of a conversation using the then-current
A-3 scrambler -- used by Roosevelt and Churchill, among others --
could be understood by the unaided ear, with some practice. It is
really quite hard to scramble speech well with pre-digital techniques.
There is too much redundancy in it.

(For more detail, see Kahn's 'The Codebreakers'.)
--
"Noalias must go. This is | Henry Spencer @ U of Toronto Zoology
non-negotiable." --DMR | {ihnp4,decvax,uunet!mnetor}!utzoo!henry

149. Re: ICF 2003 question

Newsgroup: rec.ham-radio
Date: 1988-04-20 14:14:26 UTC
From: trey@ut-emx.UUCP
Message-ID: <1785@ut-emx.UUCP>
Source record: 19738
Cross-posted to: rec.ham-radio,sci.electronics

In article <1202@oakhill.UUCP>, dsp@oakhill.UUCP (Generic DSP account) writes:
>
> I just bought one of those Sony ICF 2003 pll synthesized S/W receivers.
> On strong SSB signals the thing seems to have an FM'ing problem. If
> I collapse the antenna or set the sensitivty to low, the problem is
> reduced. Has anyone out there experienced such a problem??

One night we hooked up a Sony 2003 to the 160 meter array at N5AU so
we could listen to the Larry King Show. The Sony underwent a pretty
severe case of front end crunch. Of course, the fact that we were
only miles from KRLD-AM probably didn't help much either.
--
Trey Garlough
Computation Center, The University of Texas at Austin, Austin, Texas 78712
ARPA: trey@emx.UTEXAS.EDU UUCP: {harvard,allegra,gatech}!ut-sally!ut-emx!trey

150. Re: Understanding scrambled speech without a descrambler

Newsgroup: rec.ham-radio
Date: 1988-04-23 07:47:16 UTC
From: leonard@bucket.UUCP
Message-ID: <862@bucket.UUCP>
Source record: 19739
Cross-posted to: rec.ham-radio,sci.crypt

I remember seeing a reference somewhere regarding this. It was in some work dealing with either espoinage or cryptography during WWII. It stated that speech inversion was quickly dropped as it was possible to understand without a descrambler "with practice".

Possible it was in The Codebreakers by Kahn?

--
Leonard Erickson ...!tektronix!reed!percival!bucket!leonard
CIS: [70465,203]
"I used to be a hacker. Now I'm a 'microcomputer specialist'.
You know... I'd rather be a hacker."

151. Encapsulation in plastic for ruggedization

Newsgroup: rec.ham-radio
Date: 1988-04-25 15:52:15 UTC
From: jbn@glacier.STANFORD.EDU
Message-ID: <17420@glacier.STANFORD.EDU>
Source record: 19740
Cross-posted to: sci.electronics,rec.ham-radio

I'm interested in ruggedization treatments for small PC boards.
The first approach is conformal coatings. I've tried Final-Kote,
but all I get is a thin tacky film that takes about two days to dry.
What are some good alternatives, preferably ones that won't affect
tuned RF circuits? I'd like a thick, clear coat covering the components.

There are also plastics for fully encapsulating a circuit in a
solid block. Any suggestions here?

John Nagle

152. Re: Encapsulation in plastic for ruggedization

Newsgroup: rec.ham-radio
Date: 1988-04-26 03:17:51 UTC
From: kevin@calvin.EE.CORNELL.EDU
Message-ID: <343@calvin.EE.CORNELL.EDU>
Source record: 19741
Cross-posted to: sci.electronics,rec.ham-radio

In article <17420@glacier.STANFORD.EDU> jbn@glacier.STANFORD.EDU (John B. Nagle) writes:
> I'm interested in ruggedization treatments for small PC boards.
>What are some good alternatives, preferably ones that won't affect
>tuned RF circuits? I'd like a thick, clear coat covering the components.

The guys in my research group that build payloads for rocket experiments
use clear Dow/Corning RTV (expensive). I think they either dip the boards,
or pour it on, then pour off the excess. Makes a nice smooth coating.

--
Kevin Tubbs, 5152 Upson, Cornell University, Ithaca NY, 14853 (607) 255-8703
kevin@calvin.ee.cornell.edu {uunet,rochester}!cornell!calvin!kevin
"If you took all the CP/M users in the world, and laid them end-
to-end at the equator, it would be a good thing."

153. Weather Satellite decoder hardware and software

Newsgroup: rec.ham-radio
Date: 1988-04-28 16:42:56 UTC
From: magore@watdcsu.waterloo.edu
Message-ID: <4651@watdcsu.waterloo.edu>
Source record: 19742
Cross-posted to: comp.sys.atari.st,sci.electronics,rec.ham-radio

Hello All,

I recently posted a 3 part set of articles to rec.ham-radio that describes
a demodulator and ST software for decoding the transmissions of NOAA 9 ,
NOAA 10 and the Soviet Meteor satellites. I am planning a detailed follow up
to these articles in order to describe in greater detail the experiments I
attempted and which methods I finally rejected in order to reach the final
design of the decoder. Also I will include information on antenna design ,
preamp design and receiver modification for the Radio shack PRO27.
I would be interested in hearing from anyone who is working with any
related projects in this area...

ps. - for those who already have sent me email I will be responding
soon ... yes finally! :-) ...

Best Regards,

Mike Gore
Institute for Computer Research. (watmath!mgvax!root - at home)
These ideas/concepts do not imply views held by the University of Waterloo.

154. LORAN-C

Newsgroup: rec.ham-radio
Date: 1988-05-05 16:59:15 UTC
From: dsp@oakhill.UUCP
Message-ID: <1309@oakhill.UUCP>
Source record: 19743
Cross-posted to: rec.ham-radio,sci.electronics

I am looking for schematics for a TI 9900 LORAN-C receiver.
I have one of these gizmos and it bit the dust. TI wants $75
for a repair manual! Is anybody out there familiar with this
radio??

thanks,

Charlie Thompson WB4HVD
ut-sally!oakhill!otis!charlie

155. How to receive FM subcarrier service

Newsgroup: rec.ham-radio
Date: 1988-05-10 04:19:53 UTC
From: fktsun@violet.waterloo.edu
Message-ID: <6745@watdragon.waterloo.edu>
Source record: 19744
Cross-posted to: rec.ham-radio,rec.audio,sci.electronics

I am interested in receiving an ethnic FM subcarrier service in Toronto. Is there anyone out there who knows how I can add FM subcarrier reception capability to my present FM receivers? I am thinking of allowing either my FM tuner or my boom-box type portable AM/FM radio cassette recorder to get this kind of broadcast. Since I don't really have the technical knowhow to build a kit to do this (although I'm sure it would not be too difficult for elcetronics hobbyists), I'm mostly interested in ready-made products for this particular purpose.

And let me mention that the FM subcarrier service that I'd like to hear has posted an ad in a local paper telling people to buy a certain radio for some Cdn. $110 at some authorized dealers. I am positive that the amount asked for is a rip-off. Eager as I may be to hear that service, I am not about to be taken in that easily. This reminds me of another thing. Does anyone have some kind of listing of FM subcarrier services in Toronto? If not, is there anywhere I can acquire such information? I know that the FM Atlas by Bruce Elving tells one that a subcarrier service is carried on a certain frequency, but it does not tell one which. I'm quite sure that if I can receive all the FM subcarrier services, I will find a lot more interesting broadcasts other than the one that I have in mind right now.

Any help will be appreciated, either by posting to the net or e-mailing me. Thanks.

Frankie Sun
fktsun@violet.waterloo.edu

156. Re: How to receive FM subcarrier service

Newsgroup: rec.ham-radio
Date: 1988-05-11 18:15:08 UTC
From: Phillip_M_Dampier@cup.portal.com
Message-ID: <5330@cup.portal.com>
Source record: 19745
Cross-posted to: rec.ham-radio,rec.audio,sci.electronics

Make sure that it is legal to listen to subcarrier services in Canada. The CRTC may be upset with you otherwise.

Here in the USA, unless you are blind, a doctor, or a muzak-loving store, the Electronic Communications Privacy Act makes listening to sub-carrier signals illegal.

Hopefully, a Democratic administration can reverse the Reagan Administration's oppressive behavior.

157. TV systems for mobile robots

Newsgroup: rec.ham-radio
Date: 1988-05-12 04:04:02 UTC
From: jbn@glacier.STANFORD.EDU
Message-ID: <17441@glacier.STANFORD.EDU>
Source record: 19746
Cross-posted to: comp.ai,sci.electronics,rec.ham-radio,rec.video

I'd like to hear about experience with various cameras and radio links
used with mobile robots. I'm interested in units suitable for a small,
high-speed vehicle in which the vision processing is offboard.

The ideal device, as pointed out by Russell Anderson in "A Robot
Ping-Pong Player", is a CCD frame-transfer image sensor, since with such
devices the entire frame is acquired as a unit and no artifacts of the
scanning process appear in the image. Examples of such parts are the
Sanyo LC99xx series. (The Fisher-Price Toy Camcorder and Lionel
Loco-Vision use the LC9943, a low-resolution part from this line.
There are higher resolution parts in the same family.)
Is a minature TV camera using such a sensor with at least 250x250 resolution
available yet?

Next best is a CCD line-transfer image sensor. The better Pulnix
units have these, and many robotic groups use them. What is the experience
with these?

The Sony Watchcam is a low-cost alternative. Any experience here?

What about TV transmitters and receivers? I've seen a few TV Genie
units around, but not only are they weak, they're illegal. But they do
sbow that such a transmitter need not be large, and there are bands in
which one can obtain appropriate licences. I do need something
about that size, though, say 4x2x2 or smaller. Is there such a thing
as FM TV gear, to improve the noise immunity?

Has anyone dealt with the problem of camera stabilization and vibration
isolation in a moving vehicle? The Steadicam gyro approach seems overkill.
Sorbothane shock mounting is easy enough to do, but is it enough to get
clear single frames? Has anyone tried using data from accelerometers
and rate gyros to stabilize an image electronically?

Has anyone tried sending data back from a robot in the audio carrier
of a TV signal or in the vertical retrace interval? If so, with what hardware?

Yes, I know it's a hard, ugly problem.

John Nagle

158. Re: How to receive FM subcarrier service

Newsgroup: rec.ham-radio
Date: 1988-05-13 03:14:20 UTC
From: dan@speedy.wisc.edu
Message-ID: <5738@spool.cs.wisc.edu>
Source record: 19747
Cross-posted to: rec.ham-radio,rec.audio,sci.electronics

In article <5330@cup.portal.com> Phillip_M_Dampier@cup.portal.com writes:
>Here in the USA, unless you are blind, a doctor, or a muzak-loving store,
>the Electronic Communications Privacy Act makes listening to sub-carrier
>signals illegal.
>
>Hopefully, a Democratic administration can reverse the Reagan Administration's
>oppressive behavior.

Well, why don't we check our facts before we go blasting away? The main
House sponsor of the ECPA was a knee-jerk liberal Democrat with an ADA
rating of about 100. The Reagan administration had nothing to do with
promoting that bill.
And, if we want to discuss oppressive behavior, we could discuss the
override of the President's veto of the so-called Civil Rights Restoration
Act of 1988, which you probably think had something to do with restoring
civil rights. But, since this is the ham radio newsgroup, I will dispense
with further comments.

-- Dan, W9NK

159. Re: How to receive FM subcarrier service

Newsgroup: rec.ham-radio
Date: 1988-05-13 15:38:13 UTC
From: mitch@batcomputer.tn.cornell.edu
Message-ID: <4789@batcomputer.tn.cornell.edu>
Source record: 19748
Cross-posted to: rec.ham-radio,rec.audio,sci.electronics

In article <5330@cup.portal.com> Phillip_M_Dampier@cup.portal.com writes:
>Make sure that it is legal to listen to subcarrier services in Canada. The
>CRTC may be upset with you otherwise.

>Here in the USA, unless you are blind, a doctor, or a muzak-loving store,
>the Electronic Communications Privacy Act makes listening to sub-carrier
>signals illegal.

>Hopefully, a Democratic administration can reverse the Reagan Administration's
>oppressive behavior.

What rock did you just crawl out from under? The Reagan Administration isn't
responsible for the ECPA. It was created and pushed by the cellular telephone
industry and passed by congress before ever getting to the white house.
Granted, Reagan should have vetoed it, but failing to override the foolishness
of our elected senators and representatives doesn't make it oppressive
behavior on the part of the administration.

-Mitch Collinsworth, K2VD
mitch@tcgould.tn.cornell.edu

160. LORAN- C

Newsgroup: rec.ham-radio
Date: 1988-05-13 16:39:44 UTC
From: dsp@oakhill.UUCP
Message-ID: <1326@oakhill.UUCP>
Source record: 19749
Cross-posted to: rec.boats,sci.electronics,rec.ham-radio

I'm still looking for schematics for a Texas Instruments
LORAN C receiver model 9900. Does anybody out there have
one of these beasts? TI wants $75 for a repair manual!

Please reply via the path ut-sally!oakhill!otis!charlie

Thanks,
Charlie Thompson
Austin,TX

161. Re: How to receive FM subcarrier service

Newsgroup: rec.ham-radio
Date: 1988-05-17 00:46:09 UTC
From: mrapple@uop.edu
Message-ID: <1469@uop.edu>
Source record: 19750
Cross-posted to: rec.ham-radio,rec.audio,sci.electronics

In article <5330@cup.portal.com>, Phillip_M_Dampier@cup.portal.com writes:
> [...]
> Here in the USA, unless you are blind, a doctor, or a muzak-loving store,
> the Electronic Communications Privacy Act makes listening to sub-carrier
> signals illegal.

I don't think that's true. As far as I know, anyone can listen to
anything they want, but according to the secrecy of communications
part of the Communications Act of 1934 it IS a crime to divulge the
contents or existance of any electronics communications to a third
party or make commercial use of same if you are not a party to the
communications (unless the communications was transmitted by
a broadcaster, amateur, CBer or someone in distress).

> Hopefully, a Democratic administration can reverse the Reagan Administration's
> oppressive behavior.

Hey, leave it behind, ok? This isn't alt.flame.

Nick Sayer | Packet Radio: N6QQQ @ WA6RDH | CMS: SYSOP@STOKTON%STOCKTON
uucp: ...!sdcsvax!ucbvax!ucdavis!uop!mrapple | Fido: 161/31
Disclaimer: You didn't REALLY believe that, did you?
cat flames > /dev/null

162. Re: How to receive FM subcarrier service

Newsgroup: rec.ham-radio
Date: 1988-05-18 06:01:15 UTC
From: henry@utzoo.uucp
Message-ID: <1988May18.060115.2481@utzoo.uucp>
Source record: 19751
Cross-posted to: rec.ham-radio,rec.audio,sci.electronics

> > the Electronic Communications Privacy Act makes listening to sub-carrier
> > signals illegal.
>
> I don't think that's true. As far as I know, anyone can listen to
> anything they want, but according to the secrecy of communications
> part of the Communications Act of 1934 it IS a crime to divulge the
> contents or existance of any electronics communications...

Unfortunately the ECPA is a very different story and much harsher than
the 1934 law. Yes, it IS illegal to listen to sub-carrier signals in
the US unless you are properly authorized. The ECPA was passed last
year, if memory serves. An amazing number of things are illegal under
it. I'm amazed that you missed hearing about it; the uproar on the net
was deafening.
--
NASA is to spaceflight as | Henry Spencer @ U of Toronto Zoology
the Post Office is to mail. | {ihnp4,decvax,uunet!mnetor}!utzoo!henry

163. Re: How to receive FM subcarrier service

Newsgroup: rec.ham-radio
Date: 1988-05-19 16:48:13 UTC
From: cook@Alliant.COM
Message-ID: <1829@alliant.Alliant.COM>
Source record: 19752
Cross-posted to: rec.ham-radio,rec.audio,sci.electronics

In article <5738@spool.cs.wisc.edu> dan@cs.wisc.edu (Dan Frank) writes:
>In article <5330@cup.portal.com> Phillip_M_Dampier@cup.portal.com writes:
>>
>>Hopefully, a Democratic administration can reverse the Reagan Administration's
>>oppressive behavior.
>
> Well, why don't we check our facts before we go blasting away? The main
>House sponsor of the ECPA was a knee-jerk liberal Democrat with an ADA
>rating of about 100. The Reagan administration had nothing to do with
>promoting that bill.

Don't you just hate it when a raving political discussion breaks out in a legitimate (actually several) hobby-oriented newsgroup? I was hoping that we'd get a few gramatical buff posting about the original posters use of "hopefully" just to round things out. I've no quibbles with a good Reagan vs the evil liberals bash, but there IS a group dedicated specifically to political sniping -- two if you count alt.flames :-) Gentlepeople, please, can we go back to silver speaker wires (rec.audio) or 10 meter propogation theory (ham-radio)?

.
.
.
.

--
- Dale N1US VOICE: (617) 486-1343
ARPA: cook@alliant.alliant.com SMAIL: 1 Monarch Drive
UUCP: ...linus!alliant!cook Littleton, MA 01460

164. Re: How to receive FM subcarrier service

Newsgroup: rec.ham-radio
Date: 1988-05-19 17:11:34 UTC
From: jim@mnetor.UUCP
Message-ID: <4591@mnetor.UUCP>
Source record: 19753
Cross-posted to: rec.ham-radio,rec.audio,sci.electronics

In article <1469@uop.edu> mrapple@uop.edu (Nick Sayer) writes:

>> Here in the USA, ...
>> the Electronic Communications Privacy Act makes listening to sub-carrier
>> signals illegal.

>I don't think that's true. As far as I know, anyone can listen to
>anything they want, but...

HERE WE GO AGAIN!

BTW, that's true in Canada, but not in your "home and native land".

--
Jim Stewart, VE3SRJ
UUCP: {decvax|allegra|ihnp4|linus|utcsri}!utzoo!mnetor!jim
ARPA: mnetor!jim@seismo.css.gov
BELL: (416)475-8980 x303

165. Re: OKAY, OKAY! ENOUGH already.

Newsgroup: rec.ham-radio
Date: 1988-05-21 18:00:17 UTC
From: richh@pnet02.cts.com
Message-ID: <4137@gryphon.CTS.COM>
Source record: 19754
Cross-posted to:
comp.dcom.modems,comp.lang.c,comp.os.minix,comp.periphs,news.admin,news.groups,rec.audio,rec.ham-radio,sci.electronics

I don't like the `Space Shuttle' signature the way you've interpreted it,
which is {also the way I interpret it, but I think you must admit that
it's sufficiently ambiguous that you could find yourself xDmaking supporting
arguments {on several interpretations, such as

1) i]Both NASA and the Post Office are screwed up.
2) We should support a Space policy {that makes commercial delivery of
articles to orbit affordable and dependable
3) well -- you could read almost anything into this , I'm afraid.

This is not the only signature in all of USENET I'm not fond of, and
if you didn't like this one, an e-mail was indicated, and possibly even
the posting you made. He's made his point, you've made yours, maybe
we've al{l learned something, and life goes on.

UUCP: {ihnp4!scgvaxd!cadovax rutgers!marque}!gryphon!pnet02!richh
INET: richh@pnet02.cts.com

166. Low-power TV transmission

Newsgroup: rec.ham-radio
Date: 1988-05-25 05:41:55 UTC
From: jbn@glacier.STANFORD.EDU
Message-ID: <17464@glacier.STANFORD.EDU>
Source record: 19755
Cross-posted to: sci.electronics,rec.ham-radio

Any info about the following company, and their TV units?

P.C. Electronics
2522 S. Paxson Ln.
Arcadia CA 91006
(818) 447 4565

TXA5-33 transmitter (1w, 900MHz)
FMA-5 subcarrier generator
TVCX-33 receiver
VRC45 subcarrier demodulator

This is for a very short range research application, to be licensed under Part 5 (Experimental) not ham. Advice on suitable alternative hardware would be appreciated. The goal is good-quality color TV transmission over a few hundred feet.

John Nagle

167. Re: Low-power TV transmission

Newsgroup: rec.ham-radio
Date: 1988-05-26 20:28:31 UTC
From: brian@ucsd.EDU
Message-ID: <873@ucsd.EDU>
Source record: 19756
Cross-posted to: sci.electronics,rec.ham-radio

In article <17464@glacier.STANFORD.EDU> (John B. Nagle) writes:
> Any info about the following company, and their TV units?
>
> P.C. Electronics
> 2522 S. Paxson Ln.
> Arcadia CA 91006
> (818) 447 4565

When I called them they seemed to be a bunch of weird people.

Besides the "please wait while we look you up in the Callbook
to see if you're really a ham", they also INSISTED that I contact
a local ATVer before I order anything from them so that I'd be sure
to understand all about ham TV.

From this attitude I come to the conclusions:
1. They're really not very interested in getting new people
into the hobby.
2. They're really not very interested in selling their stuff.
3. I'll just have to wait a few years until the old farts with
this kind of attitude problem die off and do ham TV when I'm welcome.

If the people who developed and promoted packet radio treated people
this way, just how popular would packet be today? Of course, packet was
a new technology, and ham TV isn't new at all, but I'm sure not
interested in ATV anything like I was before I called them.

Or maybe it was just a real bad day in Arcadia?

Why do you suppose they bother to advertise?

Brian Kantor WB6CYT UC San Diego brian@ucsd.edu

168. Re: Low-power TV transmission

Newsgroup: rec.ham-radio
Date: 1988-05-28 00:36:27 UTC
From: rusty@hodge.UUCP
Message-ID: <200@hodge.UUCP>
Source record: 19757
Cross-posted to: sci.electronics,rec.ham-radio

In article <873@ucsd.EDU>, brian@ucsd.EDU (Brian Kantor) writes:
> 3. I'll just have to wait a few years until the old farts with
> this kind of attitude problem die off and do ham TV when I'm welcome.

I've found that it is more fun to bug the old farts to death. Make 'um nervous enough, maybe they'll drop off sooner with their heart or something.

This is exactly why I haven't gotten in to Ham-TV. Everyone makes it so hard to do anything interesting (packet excepted).

Reminds me of how they screwed up the best fleamarket/swap meet I've ever been to: the TRW Swapmeet here in So. Cal. They kicked all the computer people out; and you have to show proof of license and membership in a ham radio club(!!!) to sell there. Before, anyone could just come and sell. It was super-popular.

> Why do you suppose they bother to advertise?

Tax Write-Off. That and the "Look what I've got and you don't!" attitude. Argh.

169. Re: How to receive FM subcarrier service

Newsgroup: rec.ham-radio
Date: 1988-05-29 18:30:57 UTC
From: spectre@cisunx.UUCP
Message-ID: <10087@cisunx.UUCP>
Source record: 19758
Cross-posted to: rec.ham-radio,rec.audio,sci.electronics

In article <1469@uop.edu> mrapple@uop.edu (Nick Sayer) writes:
>
>I don't think that's true. As far as I know, anyone can listen to
>anything they want, but according to the secrecy of communications
>part of the Communications Act of 1934 it IS a crime to divulge the
>contents or existance of any electronics communications to a third
>party or make commercial use of same if you are not a party to the
>communications (unless the communications was transmitted by
>a broadcaster, amateur, CBer or someone in distress).
>

I wish that it were true. The new ECPA act, pushed through Congress
by the cellular industry, makes even the act of listening to certain
radio broadcasts illegal. You cannot listen to cellular telephone
conversations (why Tandy omitted that band on its new scanner). Also,
you cannot listen to Ham relay conversations where a private phone
is involved. However, it is legal to listen to cordless telephones.

There are probably other things you can't listen to, but I can't
remember them.

Robert L. Sillett, Jr. spectre@unix.cis.pittsburgh.edu
University of Pittsburgh spectre@pittvms.BITNET
"Don't ask me -- I only work here." ...!pitt!unix!spectre
--
Robert L. Sillett, Jr. spectre@unix.cis.pittsburgh.edu
University of Pittsburgh spectre@pittvms.BITNET
"Don't ask me -- I only work here." ...!pitt!unix!spectre

170. $5000 REWARD - Stolen DRAMs

Newsgroup: rec.ham-radio
Date: 1988-05-30 16:55:30 UTC
From: jbn@glacier.STANFORD.EDU
Message-ID: <17469@glacier.STANFORD.EDU>
Source record: 19759
Cross-posted to: sci.electronics,rec.ham-radio

$5000 Reward

FOR INFORMATION LEADING TO THE RECOVERY OF THE FOLLOWING MATERIAL:

27,362 256K DRAMs, 150ns, manufactured by AT&T, part number M41256PP15B.

5,251 64K DRAMs, 200ns, manufactured by National Semiconductor, part number NML3764N-20.

These integrated circuits were recently stolen from a company in Sunnyvale who is offering a $5000.00 reward for infomation leading to recovery of the stolen chips. If you have any information, please call T. Heffner at (408) 746-2539.

[From the San Jose Mercury News, Sunday, May 29, 1988, page 4F.]
[I (Nagle) have no connection with this offer.]

171. Re: Re: Low-power TV transmission

Newsgroup: rec.ham-radio
Date: 1988-05-31 22:03:44 UTC
From: jans@tekcrl.TEK.COM
Message-ID: <2693@tekcrl.TEK.COM>
Source record: 19760
Cross-posted to: sci.electronics,rec.ham-radio
Body handling: HTML body converted to readable text

(Discussion about cheap, low power TV transmitters led to:)
<>

If they are who I think they are, they have good reason to be somewhat secretive. They do not adequately supress the vestigal sideband, and put out a 6MHz-wide signal, rather than 4MHz, so they will not fit in the television allocation for the band plan. Instead, they've plopped the thing on 436, which makes weak-signal types furious, and possibly violates international law and/or FCC regulations. In any event, this device CANNOT be re-crystalled for a "normal" channel without causing interference, and CANNOT be operated north of the "A" line (roughly Seattle to Green Bay) because of international regulations.

If I mixed them up with someone else, I apologise. Is this the ~$150 box? It would be difficult to build a 4MHz-wide box at that price. Be suspicious of anything under about $300.

:::::: Software Productivity Technologies -- Experiment Manager Project ::::::
:::::: Jan Steinman N7JDB Box 500, MS 50-383 (w)503/627-5881 ::::::
:::::: jans@tekcrl.TEK.COM Beaverton, OR 97077 (h)503/657-7703 ::::::

172. Re: Re: Low-power TV transmission

Newsgroup: rec.ham-radio
Date: 1988-06-01 08:06:11 UTC
From: larson@unix.SRI.COM
Message-ID: <17434@sri-unix.SRI.COM>
Source record: 19761
Cross-posted to: sci.electronics,rec.ham-radio

In article <2693@tekcrl.TEK.COM> jans@tekcrl.TEK.COM (Jan Steinman) writes:

-> If they are who I think they are, they have good reason to be somewhat
-> secretive. They do not adequately supress the vestigal sideband, and
-> put out a 6MHz-wide signal, rather than 4MHz, so they will not fit in
-> the television allocation for the band plan. Instead, they've plopped
-> the thing on 436, which makes weak-signal types furious, and possibly
-> violates international law and/or FCC regulations. In any event, this
-> device CANNOT be re-crystalled for a "normal" channel without causing
-> interference, and CANNOT be operated north of the "A" line (roughly
-> Seattle to Green Bay) because of international regulations.

I don't think they are who you are thinking of. They advertise crystals
for 426.25, 434.0, and 439.25. They do not mention 436 MHz.

By the way, being on 436 should be little trouble to the weak signal
activity on 432.1.

Alan

p.s. The only bad think I can think of to say about them is that
they still ship with UPS.

173. Re: Low-power TV transmission

Newsgroup: rec.ham-radio
Date: 1988-06-01 18:52:45 UTC
From: karn@thumper.bellcore.com
Message-ID: <1114@thumper.bellcore.com>
Source record: 19762
Cross-posted to: sci.electronics,rec.ham-radio

> By the way, being on 436 should be little trouble to the weak signal
> activity on 432.1.

Except that it could be a lot of trouble to satellite users. The
satellite segment on 70cm runs from 435 to 438 Mhz, and it is actively
used for both uplinks and downlinks by several satellites.

I find it interesting that certain ATV repeaters use channels that include
the 435-438 Mhz segment, even though repeater operation there is prohibited
by the rules.

Phil

174. N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-01 22:50:42 UTC
From: cook@trane.UUCP
Message-ID: <455@trane.UUCP>
Source record: 19763
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

Your tax dollars at work......
I found this in Sky & Telescope. If you are doing projects requiring
your computer syncing with UTC, this is for you. The phone number is
(303) 494-4774, they are to add a 900 number in the future.

DESCRIPTION OF THE
AUTOMATED COMPUTER TELEPHONE SERVICE (ACTS)

The following is transmitted (at 1200 baud) following completion of the
telephone connection.

? = HELP
National Bureau of Standards
Telephone Time Service

D L D
MJD YR MO DA H M S ST S UT1 msADV OTM
47222 88-03-02 21:39:15 83 0 +.3 045.0 UTC(NBS) *
47222 88-03-02 21:39:16 83 0 +.3 045.0 UTC(NBS) *
47222 88-03-02 21:39:17 83 0 +.3 045.0 UTC(NBS) *
47222 88-03-02 21:39:18 83 0 +.3 045.0 UTC(NBS) *
47222 88-03-02 21:39:19 83 0 +.3 037.6 UTC(NBS) #
47222 88-03-02 21:39:20 83 0 +.3 037.6 UTC(NBS) #
etc..etc...etc.......

UTC = Universal Time Coordinated, the official world time referred to the
zero meridian.

DST = Daylight savings time characters, valid for the continental U.S., are
set as follows:
00 = We are on standard time (ST). 50 = We are on DST.
99 to 51 = Now on ST, go to DST when your local time is 2:00 am and the
count is 51. The count is decremented daily at 00 (UTC).
49 to 01 = Now on DST, go to ST when your local time is 2:00 am and the
count is 01. The count is decremented daily at 00 (UTC).
The two DST characters provide up to 48 days advance notice of a change in
time. The count remains at 00 or 50 at other times.

LS = Leap second flag is set to "1" to indicate that a leap second is to be
added as 23:59:60 (UTC) on the last day of the current UTC month. The LS
flag will be reset to "0" starting with 23:59:60 (UTC). The flag will
remain on for the entire month before the second is added. Leap seconds

are added as needed at the end of any month. Usually June and/or December are chosen.

The leap second flag will be set to a "2" to indicate that a leap second is to be deleted at 23:59:58--00:00:00 on the last day of the current month. (This latter provision is included per international recommendation however it is not likely to be required in the near future.)

DUT1 = Approximate difference between earth rotation time (UT1) and UTC, in steps of 0.1 second. DUT1 = UT1 - UTC

MJD = Modified Julian Date, often used to tag certain scientific data.

The full time format is sent at 1200 baud, 8 bit, 1 stop, no parity.
The HH:MM:SS msADV time format at 300 baud is also 8 bit, 1 stop, no parity.

Maximum on line time will be 55 seconds. If all lines are busy at any time, the oldest call will be terminated if it has been on line more than 15 seconds, otherwise, the call that first reaches 15 seconds will be terminated.

Current time is valid at the "on-time" marker (OTM), either "*" or "#". The nominal on-time marker (*) will be transmitted 45 ms early to account for the 8 ms required to send 1 character at 1200 baud, plus an additional 7 ms for delay from NBS to the user, and approximately 30 ms "scrambler" delay inherent in 1200 baud modems. If the caller echoes all characters, NBS will measure the round trip delay and advance the on-time marker so that the midpoint of the stop bit arrives at the user on time. The amount of msADV will reflect the actual required advance in milliseconds and the OTM will be a "#". The NBS system requires 4 consecutive delay measurements which are consistent before switching from "*" to "#". If the user has a 1200 baud modem with the same internal delay as that used by NBS, then the "#" OTM should arrive at the user within +-2 ms of the correct time. However, NBS has studied different brands of 1200 baud modems and found internal delays from 24 ms to 40 ms and offsets of the "#" OTM of +-10 ms. For many computer users, +-10 ms accuracy should be more than adequate since many computer internal clocks can only be set with granularity of 20 to 50 ms. In any case, the repeatability of the offset for the "#" OTM should be within +-2 ms, if the dial-up path is reciprocal and the user doesn't change the brand or model of modem used. This should be true even if the dial-up path on one day is a land-line of less than 40 ms (one way) and on the next day is a satellite link of 260 to 300 ms. In the rare event that the path is one way by satellite and the other way by land line with a round trip measurement in the range of 90 to 260 ms, the OTM will remain a "*" indicating 45 ms advance. For the user who wants the best possible accuracy at the OTM, NBS offers an alternate 300 baud service with only HH:MM:SS MSADV and OTM. To use the alternate service,

simply call at 300 baud. Because of the simple FSK modulation scheme used
at 300 baud, all modems tested had the same delay within about 1 ms.

The full time format will be sent at 1200 baud, 8 bit, 1 stop, no parity. The
HH:MM:SS MSADV time format at 300 baud will also be 8b, 1s, np.

For user comments write:
NBS-ACTS
Time and Frequency Division
Mail Stop 524
325 Broadway
Boulder, CO 80303

Software for setting DOS compatable machines is available on a
360-kbyte diskette for $35.00 from:
NBS Office of Standard Reference Materials
B311-Chemistry Bldg, NBS, Gaithersburg, MD, 20899, (301) 975-6776
---

175. Arctic "DXpedition"

Newsgroup: rec.ham-radio
Date: 1988-06-02 13:11:26 UTC
From: ewb@raybed2.UUCP
Message-ID: <1181@raybed2.UUCP>
Source record: 19764
Cross-posted to: rec.ham-radio,sci.electronics

From: K1YPP

On the 20th of June, 1988, two intrepid radio amateurs, K1YPP and KA1RED will set out on an adventure to the Arctic Circle. This mini DX-pedition will be unique in that the we will be traveling by motorcycle and we plan on being QRP for the entire trip.

Based on past experience it will take approximately 8 days to arrive at our destination, Inuvik (pop. 3125, 68.21 deg N.,133.43 W) in the North West Territory (NWT) of Canada. This is a bit difficult to judge because the last 2100 miles of travel is on unpaved road, and the road is closed for periods to allow Caribou herds to cross. We may stop to operate field day for some period (June 25 - 26) which could also delay us some. For these reasons we may not be active until July 2nd - 3rd. We will try our best to be active by that weekend. On July 4th we will start the return trip and operation will only be on those rare occasions when we are not too tired.

It is unclear at this point, but we may also try to make it to a town called Tuktoyaktuk (pop. 770, 69.27 deg. N., 133.02 deg. W.) on the Arctic coast. There is a road that follows the frozen river ice to it in winter, whether there is any way to get there in summer is unclear. We are in correspondence with several hams in the area and should know soon.

The equipment consists of a Heathkit HW-9, with Curtis keyer, and a collapsible vertical antenna for 40 M, 30 M, 20 M, and 15 M. The vertical was chosen because there are not many trees in that area to attach an antenna to. In most cases the tallest thing around is a polar bear, and for obvious reasons that is out of the question! We will try to give as many contacts as possible. I will use 30 M as more of a communications channel with the home QTH, but will look for contacts there as well. We will always use the highest frequency available (MUF). I (K1YPP) will make an effort to spend at least 15% of my time in the 15M novice band as well.

As a rule we will operate near the QRP calling frequencies 60 Khz in from the low end of the CW band. If too many stations are calling, we will move up to keep 60 a clear QRP channel. On the 15 M novice band we will operate around 21.140 Mhz. I am investigating obtaining a VE8 call letter for the expedition, if not we will use our calls. In either case we should be easy to find, there are not many VE8 stations on the air. Should we make enough contacts we will have a special QSL printed.

For those that are interested, the Motorcycles being used are XL600R and XL350R Hondas. We will set up camp where possible, and when available

will stay at indoor accomodations to avoid bear problems. The motorcycle battery will provide power for the station. This configuration has been very successful in the past for me. Since 1973 I have been using an HW-7, with many modifications to withstand all the vibration, and it has been a very reliable piece of equipment. It was decided that the better performance of the HW-9 would be appreceiated on this trip. My original intention was to do an entire homebrew project for this trip, but time was of the essence and the quicker solution was decided upon. The size of the equipment is important, and it must be maintainable due to the environment it must operate in, I cannot afford to send it " back to the factory " under these conditions. The same applys to the motorcycles, they are basic and easy to maintain.

Recently we did a simulated run to the White Mountains and all worked well. Should have any operating tips unique to the area, or any pertinent information about the arctic it will be read.

In all it should be a fun adventure, and I look forward to working as many of you as possible.

73,
Dennis, K1YPP

176. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-03 15:09:41 UTC
From: awpaeth@watcgl.waterloo.edu
Message-ID: <4691@watcgl.waterloo.edu>
Source record: 19765
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

In article <455@trane.UUCP> cook@trane.UUCP (Eric Cook) writes:
>
> Your tax dollars at work......
> I found this in Sky & Telescope. If you are doing projects requiring
>your computer syncing with UTC, this is for you. The phone number is
>(303) 494-4774, they are to add a 900 number in the future...
>[discussion of time signals via 1200 modem follows].

As I recall the current telephone number arrangement is truly by "land-line" --
the NBS has arranged with Bell that the signals not be routed via satellite,
as the speed of light path delay becomes a significant fraction of a second.
These guys are always "on guard for purity", and seem to do a good job at that.

/Alan Paeth
Computer Graphics Laboratory
University of Waterloo

177. Need location of Wyman Research, in Indiana US

Newsgroup: rec.ham-radio
Date: 1988-06-03 20:38:30 UTC
From: jbn@glacier.UUCP
Message-ID: <17477@glacier.STANFORD.EDU>
Source record: 19766
Cross-posted to: sci.electronics,rec.ham-radio

Where is Wyman Research, supposedly located in Indiana? This is a small company which supplies specialized TV gear. Please reply by mail.

John Nagle

178. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-06 07:34:28 UTC
From: glenn@otto.COM
Message-ID: <585@otto.COM>
Source record: 19767
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

In article <4691@watcgl.waterloo.edu>, awpaeth@watcgl.waterloo.edu (Alan Wm Paeth) writes:

>As I recall the current telephone number arrangement is truly by
> "land-line" -- the NBS has arranged with Bell that the signals not be
> routed via satellite, as the speed of light path delay becomes a
> significant fraction of a second. These guys are always "on guard for
> purity", and seem to do a good job at that.
>
> /Alan Paeth
> Computer Graphics Laboratory
> University of Waterloo

This doesn't make sense to me, so I'm not sure you're saying what I think
you are.

If I originate the call, my local telephone provider doesn't necessarily
know that I'm calling the NBS Time Service, and it would route my call via
the most viable way. That's not likely to be via "land-line" from Nevada
to Colorado.

In addition, the "speed of light delay" via satellite shouldn't be much
different than the speed of light delay over a copper wire...

Glenn
--
Glenn Scott 702-564-8347 Las Vegas Sun 702-435-4651
Henderson, Nevada Las Vegas, Nevada
glenn@otto.lvsun.com
"Officials don't know what caused the blast,
but they know it wasn't their fault."

179. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-06 20:26:19 UTC
From: woods@ncar.ucar.edu
Message-ID: <317@ncar.ucar.edu>
Source record: 19768
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

In article <585@otto.COM> glenn@otto.UUCP (Glenn Scott) writes:
> In addition, the "speed of light delay" via satellite shouldn't be much
>different than the speed of light delay over a copper wire...

WRONG! Via satellite, the signal must travel 44,000 miles (22,000 each
way to geosynchronous orbital height). Since light is about 186,000 miles
a second, we're up to nearly a quarter second delay. Over a land line from
Nevada to Colorado, we're talking a few hundred miles. This is a significant
difference.

--Greg

180. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-07 00:37:44 UTC
From: roy@phri.UUCP
Message-ID: <3335@phri.UUCP>
Source record: 19769
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

glenn@otto.UUCP (Glenn Scott) writes:
> In addition, the "speed of light delay" via satellite shouldn't be much
> different than the speed of light delay over a copper wire...

If I call Colorado from New York and get a land line, I'm going over maybe 3-4000 miles of path (doesn't make much difference if it's copper wire, microwave, or fiber; in reality it's probably a combination of all three). For a 3000 mile path at 300,000 miles/second, that's a 10 msec delay.

The kicker is that commsats are in geosynchronous orbit. If I remember correctly that means an altitude of 23,000 miles, making the path length twice that (uplink + downlink) or 46,000 miles. That's about 150 msec.

--
Roy Smith, System Administrator
Public Health Research Institute
455 First Avenue, New York, NY 10016
{allegra,philabs,cmcl2,rutgers}!phri!roy -or- phri!roy@uunet.uu.net

181. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-07 03:08:49 UTC
From: wtm@neoucom.UUCP
Message-ID: <1255@neoucom.UUCP>
Source record: 19770
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

A geosynchonous orbit, in which the telecom satellites used by Ma Bell et. al. is 22,400 miles above the equator. For any place not on the equator directly below the satellite, the path is somewhat longer.

That means that if a call is routed by satellite, just the time to get up to the bird and back down to the ground is about 300 mS. There is likely to be some delay in the ground based processing equipment too.

It is my understanding that calls are often routed so that one half will be land line, while the other half is satellite to keep the turnaround delay from becomming excessive. Ocasionally when I call overseas, I think I get a call where both sides are going via satellite. It makes you tend to repeat yourself becuase the other person's reply is delayed enough that it feels like he/she is not understanding what you said. I've also had overseas calls that are half-duplex (probably for echo cancellation), and it can be very confusing because you can't say "uh-huh, yup, right, etc" while the other person is talking. The carrier tone of the answer modem is specially designed to supposedly ensure that the call is allowed to be full duplex, assuming that the modem will do its own echo cancelling.

For land links, the trasmission delay plus the dealys introduced by the terminal equipment seems to me via qalitative observation to be well under 100 mS.

I'd imagine that Rick Adams must have some interesting stories about satellite delay. Those calls to Singapore would require several satellite hops.

Though I am not a guru, it seems feasible to me that at least some regions of the AT&T network would be smart enough to decide to give special routing to a call to a given number.

--Bill

182. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-07 14:49:51 UTC
From: awpaeth@watcgl.waterloo.edu
Message-ID: <4735@watcgl.waterloo.edu>
Source record: 19771
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

In article <585@otto.COM> glenn@otto.UUCP (Glenn Scott) writes:
>In article <4691@watcgl.waterloo.edu>, awpaeth@watcgl.waterloo.edu (Alan Wm Paeth) writes:
>
>>As I recall the current telephone number arrangement is truly by
>> "land-line" -- the NBS has arranged with Bell that the signals not be
>> routed via satellite, as the speed of light path delay becomes a
>> significant fraction of a second.
>
> If I originate the call, my local telephone provider doesn't necessarily
>know that I'm calling the NBS Time Service, and it would route my call via
>the most viable way. That's not likely to be via "land-line" from Nevada
>to Colorado. In addition, the "speed of light delay" via satellite shouldn't
> be much different than the speed of light delay over a copper wire...

I believe the arrangement involves the use of (900) prefix numbers, but your arguments are compelling. I saw the reference in "Sky and Telescope" last year.

The "speed of light delay" is indeed significant for a return bounce to a geosynchronous satellite at 40,000km. Talking long distance to Europe (from North America) can be very trying (many starts, stops and interruptions), because the delay is long enough to be interpreted as an intentional "pause", at which point both parties resume speaking, only to stop immediately when they hear the (delayed) voice of the other party.

/Alan Paeth

183. Re: Need location of Wyman Research, in Indiana US

Newsgroup: rec.ham-radio
Date: 1988-06-07 15:26:37 UTC
From: wheatley@inuxb.UUCP
Message-ID: <664@inuxb.UUCP>
Source record: 19772
Cross-posted to: sci.electronics,rec.ham-radio

>
> Where is Wyman Research, supposedly located in Indiana? This is
> a small company which supplies specialized TV gear. Please reply by
> mail.
>
> John Nagle

Wyman Research is Don Miller, W9NTP

His Address:

RR #1, Box 95
Waldron, IN 46182

(317) 525-6452

(from the central indiana radio directory)
--
Steve Wheatley
AT&T Consumer Products, Indianapolis, IN

UUCP: .....!ihnp4!inuxb!wheatley

CORNET 338-3927
DDD (317) 845-3927

184. need Airband receiver

Newsgroup: rec.ham-radio
Date: 1988-06-07 22:40:48 UTC
From: jdm@gssc.UUCP
Message-ID: <5714@gssc.UUCP>
Source record: 19773
Cross-posted to: sci.electronics,rec.ham-radio

i am looking for a good quality portable airband (AM 108MHz-136MHz) receiver.
i have very minimal requirements/preferences:
* digital or thumbwheel or ratchet tuning - not AM-radio style
* squelch
* reasonable sensitivity (superheterodyne prefered)
* low cost

i went out and spent $20 at Ripoff Shack and got an AM radio with a switch
that changes the band to 108MHz-136MHz. internally, all it does is change
a resistor.

sure, a scanner would be nice, like the Sony Air-8 (which is only sold at
Sporty's Pilot Shop, i'm told), but i don't need that capability and i don't
want to pay $220 for an AM receiver.

i am a software engineer, but i have hacked hardware a bit. does anyone in
netland have schematics for what i'm after? anybody play with the LM1820,
basically an AM-radio on a chip?

anybody have such a beast that they want to sell cheap? i would settle for
a non-portable unit if the price were right.

please email, as i don't typically read these newsgroups. if mail fails,
you can reply to rec.aviation.

thanks in advance,

-- jdm
--
...!{tektronix!verdix}!sequent!gssc!jdm John D. Miller
(503) 641-2200 Graphic Software Systems
** Is a dream a lie if it don't come true * 9590 S.W. Gemini Dr.
** or is it something worse? - Springsteen * Beaverton, OR 97005

185. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-07 23:18:15 UTC
From: glenn@otto.lvsun.com
Message-ID: <588@otto.lvsun.com>
Source record: 19774
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

In article <3335@phri.UUCP>, roy@phri.UUCP (Roy Smith) writes:
>glenn@otto.UUCP (Glenn Scott) writes:
> In addition, the "speed of light delay" via satellite shouldn't be much
> different than the speed of light delay over a copper wire...

> If I call Colorado from New York and get a land line, I'm going over
>maybe 3-4000 miles of path (doesn't make much difference if it's copper
>wire, microwave, or fiber; in reality it's probably a combination of all
>three).

Ah, well, then I don't think we're really talking about "land-lines" then.

Ten years ago, during college, I worked for "The Phone Company" as a
switchman. Way back then "land-line" meant metal. Specifically, no
multiplexing (no microwave, no fiber, no satellite).

But in any case, the receiver doesn't determine the routing. If an
ordinary consumer makes a call it is routed via the most viable route.

Glenn

PS: There is a difference between copper wire, and microwave or fiber.
Microwave and fiber are multiplexed and thus have some scheduling
delays, albeit small.

186. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-08 02:05:36 UTC
From: jfh@rpp386.UUCP
Message-ID: <2523@rpp386.UUCP>
Source record: 19775
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

In article <3335@phri.UUCP> roy@phri.UUCP (Roy Smith) writes:
>three). For a 3000 mile path at 300,000 miles/second, that's a 10 msec
>delay.

wow! faster than light telephone travel. is this something sprint
is working on? ;-)

just remember, 186,000 miles per second, it's not just a good idea, it's
the law!

- john.

187. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-08 05:32:57 UTC
From: davew@gvgpsa.GVG.TEK.COM
Message-ID: <918@gvgpsa.GVG.TEK.COM>
Source record: 19776
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

In article <3335@phri.UUCP> roy@phri.UUCP (Roy Smith) writes:
> If I call Colorado from New York and get a land line, I'm going over
>maybe 3-4000 miles of path (doesn't make much difference if it's copper
>wire, microwave, or fiber; in reality it's probably a combination of all
>three). For a 3000 mile path at 300,000 miles/second, that's a 10 msec
>delay.

> The kicker is that commsats are in geosynchronous orbit. If I
>remember correctly that means an altitude of 23,000 miles, making the path
>length twice that (uplink + downlink) or 46,000 miles. That's about 150
>msec.

Did I miss something, or were some basic laws of nature
changed when I wasn't looking? I think we have the classic
apples and oranges comparison case here. What I think Roy meant
was that the speed was 300,000 km/sec rather than miles/second.
The rest of the conversion from miles to kilometers is left as
an exercise for the student.

--
Dave White Grass Valley Group, Inc. PHONE: +1 916.478.3052
P.O. Box 1114 Grass Valley, CA 95945 davew@gvgpsa.gvg.tek.com

188. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-08 09:00:00 UTC
From: die@frog.UUCP
Message-ID: <1120@X.UUCP>
Source record: 19677
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

In article <587@otto.COM> glenn@otto.UUCP (Glenn Scott) writes:
>
> Nevertheless, my point was that the receiver does not direct the routing.
>If I make a call, it is routed via the most viable route. Satellite delays
>notwithstanding.
>
>Glenn

It is my understanding that the modern 4ESS/CCIS/SS7 AT&T long
distance switches (and probably other carriers as well) can and do
under at least some conditions selectively route calls to particular
destinations over particular types of media (such as fiber rather
than satellite).

This capability was incorperated in the telephone network some years
back in an effort to reduce the number of sensitive conversations that
are routed via certain microwave and satellite links that the Russians and
other foreign intelligence services routinely monitor. As I understand it
the network is capable of refusing to route calls to particular specific
destinations via less secure paths if all the more secure ones are busy.
Further the detailed billing tapes available from your telephone carrier
contain information about how a specific call was routed and perhaps
whether it was specially routed or not.

I do not know whether the software involved can specially
process certain blocks of numbers within an office code differently than the
rest of the office code but I suppose this is quite possible.

Whether the knowlage of what numbers to process specially is
contained in a database at the originating toll center or whether the
destination serving toll office can pass back a CCIS message identifying
a number as requiring special handling I do not know.

It is therefore quite reasonable to suppose that when the NBS time
number is called it is specially recognized and the call routed via
terrestrial rather than celestial paths at least over AT&T. --
----
David I. Emery
Charles River Data Systems
983 Concord St.
Framingham, MA 01701
Tel: (617) 626-1102
uucp: ...!decvax!frog!die

189. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-08 15:55:26 UTC
From: ldg@druin.ATT.COM
Message-ID: <268@druin.ATT.COM>
Source record: 19678
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

in article <3335@phri.UUCP>, roy@phri.UUCP (Roy Smith) says:
> Xref: druin sci.electronics:1945 sci.astro:1124 comp.dcom.modems:1203 comp.misc:1702
rec.ham-radio:3315
>
> glenn@otto.UUCP (Glenn Scott) writes:
>> In addition, the "speed of light delay" via satellite shouldn't be much
>> different than the speed of light delay over a copper wire...
> wire, microwave, or fiber; in reality it's probably a combination of all
> three). For a 3000 mile path at 300,000 miles/second, that's a 10 msec
> delay.

300,000 mi/sec???
When did this happen?
Nobody ever tells me anything.

Doug Gibbons
AT&T
ihnp4!druin!ldg

190. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-08 20:18:20 UTC
From: leonard@bucket.UUCP
Message-ID: <912@bucket.UUCP>
Source record: 19679
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

In article <585@otto.COM> glenn@otto.UUCP (Glenn Scott) writes:
<In article <4691@watcgl.waterloo.edu>, awpaeth@watcgl.waterloo.edu (Alan Wm Paeth)
writes:
<
<>As I recall the current telephone number arrangement is truly by
<> "land-line" -- the NBS has arranged with Bell that the signals not be
<> routed via satellite, as the speed of light path delay becomes a
<> significant fraction of a second. These guys are always "on guard for
<> purity", and seem to do a good job at that.
<>
<> /Alan Paeth
<> Computer Graphics Laboratory
<> University of Waterloo
<
< This doesn't make sense to me, so I'm not sure you're saying what I think
<you are.
<
< If I originate the call, my local telephone provider doesn't necessarily
<know that I'm calling the NBS Time Service, and it would route my call via
<the most viable way. That's not likely to be via "land-line" from Nevada
<to Colorado.

At the point where it has been determined that the call is going outside your
LATA they may have the computer set up too check for certain special numbers
that receive special routing. This is already done for 800 and 900 numbers,
so I'm sure they can do it for this one too!

< In addition, the "speed of light delay" via satellite shouldn't be much
<different than the speed of light delay over a copper wire...

Huh?! The wire distance from here in Oregon to Colorado is, say 1500km.
That's 5e-3 seconds. double that for the round trip. A satelite link,
goes thru a comsat in geosynchronousd orbit at 37,000km. So we've got
a total round trip length of 37,000*4= 148,000, call it 150,000 for
ease of calculation. That gives uas a lag of .5 sec!

So landline is .01, and satelite is .5. Thats close to two orders of magnitude
difference! 50 times as much lag!

--
Leonard Erickson ...!tektronix!reed!percival!bucket!leonard
CIS: [70465,203]
"I used to be a hacker. Now I'm a 'microcomputer specialist'.
You know... I'd rather be a hacker."

191. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-08 23:38:38 UTC
From: mrapple@uop.edu
Message-ID: <1540@uop.edu>
Source record: 19680
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

As I understand it, if you echo the characters you receive on the computerized version of the call, the NBS will time the echoing delay and adjust its sending rate to make sure that the <CR> at the end of the line gets to you right on time.

The best way to avoid delays is to just turn on a shortwave receiver, and try to anticipate by a little bit. :-)

I bought one of those Heathkit "most accurate clocks" that decodes the NBS time code. Nice conversation piece, that. I find it a bit of a white elephant, but it IS accurate.

Nick Sayer | Packet Radio: N6QQQ @ WA6RDH | CMS: SYSOP@STOKTON%STOCKTON
uucp: ...!sdcsvax!ucbvax!ucdavis!uop!mrapple | Fido: 161/31
Disclaimer: You didn't REALLY believe that, did you?
cat flames > /dev/null

192. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-09 10:06:45 UTC
From: thad@cup.portal.com
Message-ID: <6381@cup.portal.com>
Source record: 19681
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

The operative word here is `DISTANCE.'

Delays over a known satellite link are quite noticeable (contrasted to a land-line). Consider: 25,000 miles "up" and 25,000 miles back "down" is approx. 1/3 second.

193. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-09 18:01:15 UTC
From: les@chinet.UUCP
Message-ID: <5785@chinet.UUCP>
Source record: 19682
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

In article <11983@ut-sally.UUCP> nather@ut-sally.UUCP (Ed Nather) writes:
>We sometimes send data via the phone lines, and satellite delay kills us.

Is there a file transfer protocol that works well over satellite? Zmodem is supposed to allow the amount of outstanding data to be specified, but the sources that have been posted do not include a dialer or login routine to establish a connection. Does anyone have something like this working? How about uucp 'x' protocol (or 'f' or 'g' with the # of packets increased) or a kermit w/sliding windows for unix? Is there any real-world data on transfer rates using any of these protocols?

194. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-09 20:25:59 UTC
From: glenn@otto.lvsun.com
Message-ID: <593@otto.lvsun.com>
Source record: 19683
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

In article: <11997@ut-sally.UUCP>, nather@ut-sally.UUCP (Ed Nather) writes:
>In article <1120@X.UUCP>, die@frog.UUCP (Dave Emery) writes:
>> It is therefore quite reasonable to suppose that when the NBS time
>> number is called it is specially recognized and the call routed via
>> terrestrial rather than celestial paths at least over AT&T. --

>Yes, but is it *so*.

I just called ATT Long Distance Services (800-222-0400) to determine this, and although they have a hard line on not divulging details on another customers accounts, they told me that "No, we have no special arrangements to route calls placed to specific phone numbers." Of course they do have special arrangements for 800 and 900 numbers, but not 303-499-7111.

They (Gene and Nancy) were quick to point out, however, that routing a call via satellite was the rare case and that I shouldn't be "too concerned over that". So, in that light it is reasonable to suppose that when the NBS time number is called it does not travel over celestial routes.

I don't think this is necessarily the last word on this. The people I talked to weren't directly involved in routing and they wouldn't tell me who to contact to get more specific info.

Perhaps someone else out in netland knows who to contact to solve this ?

Glenn

PS: Many thanks to all of those who blasted me and set me straight on satellites.

195. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-09 23:21:06 UTC
From: jnp@calmasd.GE.COM
Message-ID: <2799@calmasd.GE.COM>
Source record: 19684
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

I'm not usually prone to flames, but this just "pushed my button":

> If I call Colorado from New York and get a land line, I'm going over
> maybe 3-4000 miles of path

3-4000 miles! WHAT? From Connecticut to San Diego by CAR and the not
arrow straight roads is 3200 miles! NYC to Boulder is 2000+ miles.
NE Main to SW California is <4000 miles.

Will we ever start teaching geography again in this country?

--
These opinions are solely mine and in no way reflect those of my employer.
John M. Pantone @ GE/Calma R&D, 9805 Scranton Rd., San Diego, CA 92121
...{ucbvax|decvax}!sdcsvax!calmasd!jnp jnp@calmasd.GE.COM GEnie: J.PANTONE

196. Re: 300,000 mi/sec

Newsgroup: rec.ham-radio
Date: 1988-06-10 04:40:19 UTC
From: bobmon@iuvax.cs.indiana.edu
Message-ID: <9575@iuvax.cs.indiana.edu>
Source record: 19685
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

ldg@druin.ATT.COM (Doug Gibbons) writes:
)
)300,000 mi/sec???
)When did this happen?
)Nobody ever tells me anything.

Yeah, well, they upped the Interstate limits to 65mph, also... you probably
didn't notice because everybody was already going that fast anyway.
(Goldurn blue-shifted semis!)
--
-bob,mon
"In this position, the skier is flying in a complete stall..."

197. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-10 15:56:24 UTC
From: wcb@sortac.UUCP
Message-ID: <260@sortac.UUCP>
Source record: 19686
Cross-posted to: sci.electronics,comp.dcom.modems,comp.misc,rec.ham-radio

In article <588@otto.lvsun.com> glenn@otto.lvsun.com (Glenn Scott) writes:
>---
>PS: There is a difference between copper wire, and microwave or fiber.
> Microwave and fiber are multiplexed and thus have some scheduling
> delays, albeit small.

There is a difference between copper wire, and microwave or fiber - but
the difference is not that multiplexing doesn't apply to copper wire. A
lot of long distance traffic that goes over copper wire is multiplexed;
the copper wire(s) being in a coaxial cable (often run underground.)

--
"Even if the wheels fall off, we can SLIDE in from here!"
- Rick Mears, just before winning the '88 Indy 500

Bill Barksdale AT&T Network Systems Atlanta, GA

198. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-11 12:35:48 UTC
From: james@bigtex.uucp
Message-ID: <2691@bigtex.uucp>
Source record: 19687
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

IN article <5785@chinet.UUCP>, les@chinet.UUCP (Leslie Mikesell) wrote:
> Is there a file transfer protocol that works well over satellite? Zmodem
> is supposed to allow the amount of outstanding data to be specified, but
> the sources that have been posted do not include a dialer or login routine
> to establish a connection.

The posted sources are for the transfer protocol, nothing more. It's expected
that you'll use "cu" or equivalent to make the underlying connection. In DOS
you could use Pro-YAM or any of a number of modem programs that support
external protocol modules (Qmodem and Procomm?). When you're writing a
protocol driver, adding the connection code just yields a mess of a program
(witness the various Kermit implementations).

> Does anyone have something like this working?
> How about uucp 'x' protocol (or 'f' or 'g' with the # of packets increased)
> or a kermit w/sliding windows for unix? Is there any real-world data on
> transfer rates using any of these protocols?

I don't think C-Kermit supports sliding windows. uucp 'g' only permits
a maximum of 7 packets or just under 500 bytes outstanding (about 2.2 seconds
at 2400bps). Every now and again Chuck Forsberg posts real numbers for all
this stuff.

The best bet is Zmodem. The source code is readily available and in C. The
code is small enough to work with too. It's pretty CPU efficient on both
ends, and can allow for indefinite delays in propagation (it isn't necessary
to have ACKs streaming back at the sender). Zmodem also handles varying
line quality by dynamicly adjusting the packet size from a low of 32 bytes
to at least 1K per packet. Finally, the most important thing to me is that
on those occasions when you need to transfer GNU emacs by modem, you don't
have to worry about the line being dropped two hours into your international
phone call: you just call back and have zmodem continue the transfer where
it left off. To the best of my knowledge, none of the other protocols you
list can continue a transfer in the middle of a file like this.
--
James R. Van Artsdalen ...!ut-sally!utastro!bigtex!james "Live Free or Die"
Home: 512-346-2444 Work: 328-0282; 110 Wild Basin Rd. Ste #230, Austin TX 78746

199. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-12 00:03:29 UTC
From: roy@phri.UUCP
Message-ID: <3348@phri.UUCP>
Source record: 19688
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

I wrote:
> If I call Colorado from New York and get a land line, I'm going over
> maybe 3-4000 miles of path

which caused jnp@calmasd.GE.COM (John Pantone) to flame me:
> 3-4000 miles! WHAT? [...] NYC to Boulder is 2000+ miles. [...]
> Will we ever start teaching geography again in this country?

Not only was I using round numbers, but it is indeed possible that
the length of a terrestrial phone circuit from NYC to Boulder is 4000
miles. Calls get routed in strange ways sometimes if the direct trunks are
overloaded. NYC->LA->Boulder might very well be 4000 miles as the electron
flows.

Jeeze! I posted what I thought was a reasonably informed answer to
somebody's question. The result is that I've been roasted for using the
wrong units by mistake, taken to task for saying that geosynchronous orbit
was 23,000 miles instead of 22,400, and now I get accused of not knowing my
geography. This net sure is a rough place; they don't let you get away
with anything!
--
Roy Smith, System Administrator
Public Health Research Institute
455 First Avenue, New York, NY 10016
{allegra,philabs,cmcl2,rutgers}!phri!roy -or- phri!roy@uunet.uu.net

200. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-13 07:25:58 UTC
From: eugene@pioneer.arpa
Message-ID: <10255@ames.arc.nasa.gov>
Source record: 19689
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

In article <2799@calmasd.GE.COM> jnp@calmasd.GE.COM (John Pantone) writes:
>
>I'm not usually prone to flames, but this just "pushed my button":
>Will we ever start teaching geography again in this country? [stuff rm'ed]

Okay geography is part of planetary science. Other flames to
other groups.

If you want buttons pushed, run a computer graphics society, hold a
meeting on computer geography and cartography. Be ready to hear a lot
of bogus info from the audience. Back to astronmy, please.

Another gross generalization from

--eugene miya, NASA Ames Research Center, eugene@aurora.arc.nasa.gov
resident cynic at the Rock of Ages Home for Retired Hackers:
"Mailers?! HA!", "If my mail does not reach you, please accept my apology."
{uunet,hplabs,ncar,decwrl,allegra,tektronix}!ames!aurora!eugene
"Send mail, avoid follow-ups. If enough, I'll summarize."

201. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-13 13:02:38 UTC
From: halle@homxc.UUCP
Message-ID: <2389@homxc.UUCP>
Source record: 19690
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

In article <2799@calmasd.GE.COM>, jnp@calmasd.GE.COM (John Pantone) writes:
>
> I'm not usually prone to flames, but this just "pushed my button":
> > If I call Colorado from New York and get a land line, I'm going over
> > maybe 3-4000 miles of path
> 3-4000 miles! WHAT? From Connecticut to San Diego by CAR and the not
> arrow straight roads is 3200 miles! NYC to Boulder is 2000+ miles.
> NE Main to SW California is <4000 miles.
> Will we ever start teaching geography again in this country?

Read the posting again. He said 3-4000 miles of path, i.e. 3000+ miles of wire. That estimate is reasonable. A general rule of thumb is that the path length (to use his words) is about 1.5 times the airline distance. For long haul such as this the multiplier often drops to about 1.3, but rarely much lower. So I'd say that his estimate is reasonable.

Will we ever start teaching thinking again in this country? Or manners?

202. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-13 13:45:04 UTC
From: hgp@lzaz.ATT.COM
Message-ID: <151@lzaz.ATT.COM>
Source record: 19691
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

I've got a copy of the NBS Time distribution disk. If someone sends
me shar and arc, I'll post it. Or, if you send me a 5 1/4 diskette,
amd a stamped, addressed return envelope, I'll send you a copy...

Howard G. Page
AT&T IS
307 Middletown-Lincroft Road, Room 1B-115K
Lincroft, NJ 07738-1526

--

Howard G. Page AT&T LZ 1B-115K (201)576-2731 ..!ihnp4!lzaz!hgp

203. Modem-type chips for non-telephone channels

Newsgroup: rec.ham-radio
Date: 1988-06-14 03:30:43 UTC
From: jbn@glacier.STANFORD.EDU
Message-ID: <17490@glacier.STANFORD.EDU>
Source record: 19692
Cross-posted to: sci.electronics,rec.ham-radio

What simple chips or modules are available for data transmission over a good-quality audio channel? I'd like to get 15Kb or more, and have an audio channel with about 15KHz bandwidth. The link is simplex; it's a telemetry system. So systems with handshaking, cooperative equalization, and retransmission are out. This eliminates some of the more exotic modem technologies, but then, at 1 baud per hertz, they should not be necessary.

Someone mentioned some new Motorola parts here recently, but I don't have the reference. Did anyone catch that go by?

John Nagle

204. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-15 01:23:25 UTC
From: donegan@stanton.TCC.COM
Message-ID: <56@stanton.TCC.COM>
Source record: 19693
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

I came across a dos based time service program that used a Hayes modem to autodial the Naval Observatory in the Wash. DC area (I think) and retrieved the REAL time (plus/minus a second or so). If anyone knows of source for a similar program that I could port to my UNIX system I'd appreciate having it.

Thanks.
--
Steven P. Donegan
Sr. Telecommunications Analyst
Western Digital Corp.
donegan@stanton.TCC.COM

205. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-06-15 02:47:54 UTC
From: is813cs@pyr.gatech.EDU
Message-ID: <5929@pyr.gatech.EDU>
Source record: 19694
Cross-posted to: sci.electronics,sci.astro,comp.dcom.modems,comp.misc,rec.ham-radio

In article <3348@phri.UUCP> roy@phri.UUCP (Roy Smith) writes:
[History of poor Roy's unfortunate error deleted]

> Jeeze! I posted what I thought was a reasonably informed answer to
>somebody's question. The result is that I've been roasted for using the
>wrong units by mistake, taken to task for saying that geosynchronous orbit
>was 23,000 miles instead of 22,400, and now I get accused of not knowing my
>geography. This net sure is a rough place; they don't let you get away
>with anything!
>Roy Smith, System Administrator
>{allegra,philabs,cmcl2,rutgers}!phri!roy -or- phri!roy@uunet.uu.net

The worst part about the whole business is the incredible
waste of net bandwidth by all those people who said:

" Hey, look at this! Some guy screwed up on the speed of
light! I know what the speed of light is, I'll show the whole
world I'm smarter than this here System Administrator. He
even rounds off numbers! Must be one of those sloppy engineers.
I'm gonna post a correction so evryone can be enlightened! "

It seems that this group had more traffic in flames to Roy
than it has had in real discussions in a long time.

What have we gotten? Lots of copies of people saying the same thing.
The moral:

READ BEFORE YOU POST!!!!!
If you want to correct or answer, mark that message as unread, finish
reading the group, then go back and post your response! Don't wind up
posting the same stuff everyone else has posted.

Thank you. Feel better now...

STAMP OUT AND ABOLISH REDUNDANCY!

--
||...despair! Despair I can handle, it's the hope... J.Cleese,Clockwise ||
Cris Simpson
is813cs@pyr.gatech.edu GA Tech Atlanta,GA
...!{akgua,allegra,amd,hplabs,ihnp4,seismo,ut-ngp}!gatech!gitpyr!is813cs

206. Mike Gore articles, NOAA weather descrambler

Newsgroup: rec.ham-radio
Date: 1988-06-16 20:02:08 UTC
From: bkc@sun.soe.clarkson.edu
Message-ID: <1080@sun.soe.clarkson.edu>
Source record: 19695
Cross-posted to: rec.ham-radio,sci.electronics

Hi,

Several weeks ago Mike Gore apparently posted three articles on descrambling NOAA weather satellite transmissions. I would like to obtain a copy of these articles. If anyone can send me a copy I would appreciate it.

Also, Mike Gore, if you are reading this: I sent some followup mail to you inquiring about the subsequent information you mentioned that you were going to post. I never received a response and I am curious if you received my mail.

Thanks all

Brad Clements

207. Modem chips for 9600 baud over good-quality audio channel

Newsgroup: rec.ham-radio
Date: 1988-06-21 03:14:17 UTC
From: jbn@glacier.STANFORD.EDU
Message-ID: <17506@glacier.STANFORD.EDU>
Source record: 19696
Cross-posted to: sci.electronics,rec.ham-radio

I'd like to transmit 9600 baud, simplex, (one-way) over a good-quality audio channel that can handle at least 10KHz. The transmit end must be small and consume modest power; this is a telemetry application. Telephone oriented modems assume a much narrower audio bandwidth (about 3-4KHz) and thus must use very elaborate techniques to cram 9600 baud into that narrow a bandwidth. I'm looking for something simpler, with about 1 baud/Hz channel utilization. This should be about as complex as a 2400 baud modem, for which there exist single-chip versions such as the Fairchild F2224. But that chip can't be turned up to 9600 baud, as far as I know. Any better ideas?

The guys who want to push more bits through VHF FM repeaters might have some ideas on this.

John Nagle

208. Re: Modem chips for 9600 baud over good-quality audio channel

Newsgroup: rec.ham-radio
Date: 1988-06-24 17:06:02 UTC
From: bill@videovax.Tek.COM
Message-ID: <5064@videovax.Tek.COM>
Source record: 19697
Cross-posted to: sci.electronics,rec.ham-radio

In article <17506@glacier.STANFORD.EDU> jbn@glacier.STANFORD.EDU (John B. Nagle) writes:

> I'd like to transmit 9600 baud, simplex, (one-way) over a good-quality
>audio channel that can handle at least 10KHz.

I posted a reply to this in comp.dcom.modems if anyone is interested.
--
Bill McFadden Tektronix, Inc. P.O. Box 500 MS 58-639 Beaverton, OR 97077
UUCP: bill@videovax.Tek.COM, {hplabs,uw-beaver,decvax}!tektronix!videovax!bill
GTE: (503) 627-6920 "How can I prove I am not crazy to people who are?"

209. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-07-01 21:08:35 UTC
From: fred@mimsy.UUCP
Message-ID: <12277@mimsy.UUCP>
Source record: 19698
Cross-posted to: sci.astro,comp.dcom.modems,rec.ham-radio

In article <56@stanton.TCC.COM> donegan@stanton.TCC.COM
(Steven P. Donegan) writes:

I came across a dos based time service program that used a
Hayes modem to autodial the Naval Observatory in the Wash. DC
area (I think) and retrieved the REAL time (plus/minus a second
or so). If anyone knows of source for a similar program that I
could port to my UNIX system I'd appreciate having it.

We've been running such a program, which I wrote, at U of M for over a
year now. It's written in C, and runs under Berkeley Unix. It consists
of a rather large dialer program -- the moral equivalent of 'cu' and
such -- and a few special-purpose programs, including the one for
talking to the Naval Observatory's clock, which can hang off the back
end. We have a single line in our crontab file which runs this once a
night.

The Naval Observatory is , by law, the time standard for the country,
so their clock is, by definition, absolutely correct. The
machine-readable clock they provide is accurate to within about 15
milliseconds. The phone number is (202) 653-0351. It answers at 1200
baud, even parity. There's no login sequence and you don't have to
respond to it, it just spits out alternating ascii asterisks and
strings of digits containing the julian date and the universal time.
The string of digits refers to the PRECEDING asterisk, not the next.
("At the tone, the time was . . . ")

If you want a copy of this whole package (the clock-setter is only part
of it) those of you on the internet can do an anonymous ftp to
mimsy.umd.edu and grab the file 'x.shar'. If you can't get it this way,
let me know and I'll try something more drastic.
--
Fred Blonder (301) 454-7690
uunet!mimsy!fred
Fred@Mimsy.umd.edu

210. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-07-02 15:27:41 UTC
From: nather@ut-sally.UUCP
Message-ID: <12256@ut-sally.UUCP>
Source record: 19699
Cross-posted to: sci.astro,comp.dcom.modems,rec.ham-radio

In article <12277@mimsy.UUCP>, fred@mimsy.UUCP (Fred Blonder) writes:
>
> The Naval Observatory is , by law, the time standard for the country,
> so their clock is, by definition, absolutely correct.

That's good to know, since it solves a basic research problem I'm facing.
I've been watching a variable white dwarf (G117-B15A) for several years,
waiting to see a tiny change in its frequency that would denote secular
cooling. Data in hand show it to be constant to about 1 part in 10e+15.
[repeat: 10e+15] This is about the limit of accuracy claimed by the NBS
time service, so I was worried: If I see a chnage was it the star or NBS?

Now I'll just check the Naval Observatory time, and I'll KNOW.

It's nice to have the law on your side ...

211. Facsimile modems

Newsgroup: rec.ham-radio
Date: 1988-07-07 04:56:52 UTC
From: jbn@glacier.STANFORD.EDU
Message-ID: <17531@glacier.STANFORD.EDU>
Source record: 19700
Cross-posted to: comp.dcom.modems,sci.electronics,rec.ham-radio

There are some interesting modem chip sets available for high-speed half-duplex data transmission. These are intended for fax machines, but are actually general-purpose digital modems. The Rockwell R96MD is a 9600 bps half-duplex modem, V.29 compatible, available as a two-chip set on a board for $175 in quantity 1. This looks like an interesting unit for specialized applications such as telemetry, amateur packet radio, and such. It's bus-compatible with 8080-type processors, and can be made to talk to other 8-bit paths with the usual glue. Or it can be operated via an RS-232 interface, bearing in mind that this is a synchronous modem.

Rockwell promises a single-chip version next year, the R96MFX.

Anyone ever use these things?

Contact your local Rockwell rep for further info. The "Modem Products Data Book" has all the data sheets.

John Nagle

212. Out of band with the BC-250

Newsgroup: rec.ham-radio
Date: 1988-07-07 14:34:49 UTC
From: ewb@raybed2.UUCP
Message-ID: <1189@raybed2.UUCP>
Source record: 19701
Cross-posted to: rec.ham-radio,sci.electronics

" OUT OF BOUNDS"

The procedure outlined below will allow you to stretch the frequency limits of the venerable Bearcat BC-250. You can store these frequencies in the normal memory banks and scan them. Remember that the sensitivity of the scanner drops off as you get away from the design limits of the radio. This procedure was published many years ago in what I think is Scan Magazine. Standard disclaimer applies.

Suppose, for this example, that you wanted to monitor a frequency above the 174 MHz band edge. SEARCH a small area near the upper* edge of the band, for instance 173-173.9 MHz. Open the squelch to stop the search, then enter that frequency into the STORE memory using the LOCKOUT. For this example we will say the frequency is 173.8 MHz. Set up SEARCH limits for less* than the STORED frequency. Push MANUAL then RECALL. Note that 173.8 will be displayed. Now SEARCH upward* from there. The BC-250 will go on past the 174 MHz band edge. When you reach the frequency that you desire, open the squelch to stop SEARCH. SLOW speed search is very helpful here. You will now have displayed your chosen frequency. We'll assume it's 179.75 MHz. Press the LOCKOUT button to enter this frequency into the STORE memory.
To enter this frequency into a regular channel, first select a channel. Then, using the RECALL. retrieve the desired frequency. Now turn the BC-250 OFF then ON again. 179.75 will be stored in the non-volatile memory and can be scanned as usual.

73 and good listening,
Gene Balinski
WA1UXA

* To go below a band, reverse these steps.

<Standard Disclaimer Applies!!>

213. More Mods for the PRO 2004 !!

Newsgroup: rec.ham-radio
Date: 1988-07-07 18:29:59 UTC
From: ewb@raybed2.UUCP
Message-ID: <1193@raybed2.UUCP>
Source record: 19702
Cross-posted to: rec.ham-radio,sci.electronics

From Monitoring Times July 88 Volume7 number 7, Page 93

That's right folks, more mods for the '2004. Remember these mods are done at your own risk. Have fun.

In a previous posting the question of enabling 520 to 760 MHz came up. Apparently this info was false. It cannot be done. (at least at this writing) But adding an "S" meter is even easier than previously thought. Pin 10 on the IF amplifier is an "S" meter output. With the proper bridge or meter buffer/amplifier an "S" meter is reality. But wait, there's more !!

Turbo scan for the 2004 ??? Yes !! Someone has realized that if you replace the present 7.37 MHz ceramic resonator CX501, with a 10.7 MHz ceramic resonator it really boosts the scan/search speed! The present resonator is soldered between pins 29 and 30 of the CPU (IC-503). Rumor has it that a 10.00 MHz computer xtal will work just fine. Note the effect of the speed mod on weak signal performance is presently unknown.

Hopefully someone can/will verify that these mods work. (Bob Parnass where are you ???) Good Listening.
73
Gene Balinski
WA1UXA

<Standard Disclaimer Applies>

P.S. Be sure to UNPLUG the radio before OPENING the case !!!!
P.S.P.S. For further info see Monitoring Times Mag. I strongly suggest that you subscribe to this mag and read the article on the mods.

Monitoring Times Magazine
P.O Box 98
Brasstown, N.C. 28902
PH 704-837-9200

214. Re: Facsimile modems

Newsgroup: rec.ham-radio
Date: 1988-07-08 18:30:19 UTC
From: yuval@taux01.UUCP
Message-ID: <819@taux01.UUCP>
Source record: 19703
Cross-posted to: comp.dcom.modems,sci.electronics,rec.ham-radio

> There are some interesting modem chip sets available for high-speed
> half-duplex data transmission. These are intended for fax machines, but
> are actually general-purpose digital modems. The Rockwell R96MD is
> a 9600 bps half-duplex modem, V.29 compatible, available as a two-chip
> set on a board for $175 in quantity 1. This looks like an interesting

Is the DSP chip inside that modem-chip documented anywhere? in particular,
is its multiplier 16*16 giving 32 bits, or 16*16 giving high-order 16 bits,
or 16*16 giving low-order 16 bits, or ... ?
--
Gideon Yuval, yuval@taux01.nsc.com, +972-2-690992 (home) ,-52-522255(work)
Paper-mail: National Semiconductor, 6 Maskit St., Herzliyah, Israel
(alternative E-mail address: decwrl!nsc!taux01!yuval@uunet.uu.net)

215. Re: More Mods for the PRO 2004 !!

Newsgroup: rec.ham-radio
Date: 1988-07-09 04:15:56 UTC
From: parnass@ihuxz.ATT.COM
Message-ID: <3064@ihuxz.ATT.COM>
Source record: 19704
Cross-posted to: rec.ham-radio,sci.electronics

About the Radio Shack PRO-2004 scanner, Gene Balinski
WA1UXA, wrote:

> ...But adding an "S" meter is even easier than previously thought.
> Pin 10 on the IF amplifier is an "S" meter output.
> With the proper bridge or meter buffer/amplifier an "S" meter
> is reality....
>
> Hopefully someone can/will verify that these mods
> work. (Bob Parnass where are you???) Good Listening.

Despite the internal IC block diagram in the service manual,
WBFM IC pin 10 on my PRO-2004 is useful as an S-meter output
only when the radio is in the WBFM mode.

Between pin 10 and ground, I placed a 10,000 ohm resistor in
series with a 250 microamp meter for a simple test setup.
The meter read full scale on strong WBFM signals. With no
signal at all, the meter read about 70% of full scale.

One could add a bridge, but this metering point is of limi-
ted utility.

COR lights are handy as visual cues in a room filled with
operating scanners. Pin 13 on the NBFM IC is a good pickoff
point for triggering a COR light. I applied the signal on
pin 13 through a 10,000 ohm resistor to the base of an NPN
transistor switch to actuate an LED when a carrier is
present.
--
===-===-===-===-===-===-===-===-===-===-===-===-===-===-===-===-===-===-===-===
Bob Parnass AJ9S, AT&T Bell Laboratories - att!ihuxz!parnass - (312)979-5414

216. Lightning Protection Bibliographies

Newsgroup: rec.ham-radio
Date: 1988-07-12 01:07:30 UTC
From: ornitz@kodak.UUCP
Message-ID: <1311@kodak.UUCP>
Source record: 19705
Cross-posted to: sci.electronics,rec.ham-radio,comp.misc,sci.physics

I noticed the following bibliographies available from the NTIS in a recent issue of the Government Reports Index. These bibliographies may be ordered from the National Technical Information Service, Springfield, VA.

PB87-865333/GAR Aug. 87, 104p Supercedes PB86-865367 PC N01/MF N01
Telecommunication Equipment: Atmospheric Discharge Protection. January 1975 - August 1987 (Citations from the INSPEC: Information Services for the Physics and Engineering Communities Database).

"This bibliography contains citations concerning the effects of atmospheric discharge on telecommunications installations. Lightning protection design methods for telecommunications equipment employing solid-state devices are emphasized. Travelling wave phenomenon and resulting overvoltage are considered showing protection circuitry. The operation of lightning arresters and protection of overhead cable lines are included. [This bibliography contains 222 citations, 35 of which are new entries to the previous edition.]"

PB87-865846/GAR Aug. 87, 117p Supercedes PB86-872801 PC N01/MF N01
Lightning, Surge, and Transient Protection. December 1982 - August 1987 (Citations from the NTIS Database).

"This bibliography contains citations concerning techniques and devices for the protection of electronic and electrical equipment from lightning and electrical surges, and data and protective devices for lightning strikes on structures, ships, and aircraft. The citations include research on suppressors, limiters, lightning arrestors, electromagnetic pulse protection devices, and overvoltage protection networks. Excluded are references to electromagnetic shielding. [This updated bibliography contains 221 citations, 41 of which are new entries to the previous edition.]"

++++++++++++++++++++++++++++++ I hope these save you some grief. 73!
Barry WA4VZQ

```
-----------------
| ___ ________ |
| | / / | | Dr. Barry L. Ornitz UUCP:...!rochester!kodak!ornitz
| | / / | | Eastman Kodak Company
| |< < K O D A K| | Eastman Chemicals Division Research Laboratories
| | \ \ | | P. O. Box 1972
| |__\ \________| | Kingsport, TN 37662 615/229-4904
| |
-----------------
```

217. Re: N.B.S. Time Service

Newsgroup: rec.ham-radio
Date: 1988-07-12 14:54:40 UTC
From: mike@whutt.UUCP
Message-ID: <3507@whutt.UUCP>
Source record: 19706
Cross-posted to: sci.astro,comp.dcom.modems,rec.ham-radio

```
> In article <56@stanton.TCC.COM> donegan@stanton.TCC.COM
> (Steven P. Donegan) writes:
>
> I came across a dos based time service program that used a
> Hayes modem to autodial the Naval Observatory in the Wash. DC
> area (I think) and retrieved the REAL time (plus/minus a second
> or so). If anyone knows of source for a similar program that I
> could port to my UNIX system I'd appreciate having it.

I've been running such a program, which I wrote, at home for over six
months now. It's written in C, and runs under System V (or any UNIX
system with an stime(2) system call). It consists of a single program
called "utc" (universal time coordinated). When invoked with options,
it reads the Naval clock and does one or both of these things:

-s sets the time via stime(2)
-p prints the time via ctime(3C)

If it can't read the time from the standard input, it exits non-zero.
When invoked without options, it prints the time in Naval clock format
for about a minute. Thus, it can be installed as a login shell to provide
time service for your other systems without having them all call DC.
As a test, "utc | utc -p" should print the current time. You can pipe
cu right into it, so set up a crontab entry to execute

cu 1-201-653-0351 | utc -s

You may have to fix your cu to die properly when it receives a SIGPIPE.
I have my crontab entry run once a day, but it only calls DC if the
time hasn't been set in over a week. A simple shell file accomplishes
this:

LAST=/etc/.lastutc
[ -z "`find $LAST -mtime -7 -print`" ] &&
cu 1-202-653-0351 | utc -s && >$LAST

---8<--------8<---------- cut here for utc.c ------------8<--------------8<---
/*
* The Naval Observatory clock (+1 202 653 0351) prints this every second:
*
* *
* jjjjj ddd hhmmss UTC
*
* jjjjj Julian date modulo 2400000
* ddd days since beginning of year
```

```
* hhmmss time of day in Universal Time Coordinated
*/

#include <stdio.h>
#include <time.h>
#include <sys/types.h>

#define EPOCH 40587 /* UNIX starts JD 2440587, */
#define leap(y, m) ((y+m-1 - 70%m) / m) /* also known as 1/1/70 */
#define TONE '*'
#define TIME "\n%05ld %03d %02d%02d%02d UTC"

main(argc, argv)
int argc;
char *argv[];
{
int setflg = 0, prtflg = 0;
int y, d, h, m, s;
long j;
time_t now;
int c;

while ((c = getopt(argc, argv, "sp")) != EOF)
switch (c) {
case 's': setflg++; break;
case 'p': prtflg++; break;
default:
fprintf(stderr, "usage: %s [-s] [-p]\n", argv[0]);
return 1;
}
if (setflg || prtflg) {
while ((c = getchar()) != TONE)
if (c == EOF)
return 1;
if (scanf(TIME, &j, &d, &h, &m, &s) != 5)
return 1;
now = (((j - EPOCH) * 24 + h) * 60 + m) * 60 + s;
if (setflg && stime(&now) == -1)
perror(argv[0]);
if (prtflg)
fputs(ctime(&now), stdout);
} else {
for (c = 0; c < 60; c++) {
time(&now);
s = (now % 60);
m = (now /= 60) % 60;
h = (now /= 60) % 24;
d = (now /= 24) % 365;
j = now + EPOCH;
y = (now /= 365);
d += 1 - leap(y, 4) + leap(y, 100) - leap(y, 400);
```

```
putchar(TONE);
printf(TIME, j, d, h, m, s);
putchar('\n');
fflush(stdout);
sleep(1);
}
}
return 0;
}
--
Michael Scott Baldwin research!mike attmail!mike mike@att.arpa
AT&T Bell Laboratories +1 201 386 3052
```

218. monimatch?

Newsgroup: rec.ham-radio
Date: 1988-07-13 00:58:07 UTC
From: bks@ucbarpa.Berkeley.EDU
Message-ID: <25048@ucbvax.BERKELEY.EDU>
Source record: 19707
Cross-posted to: rec.ham-radio,sci.electronics

i'm interested in building an swr meter to use on amateur hf frequencies. a chapter of the 1962 edition of the Radio Amateur's Handbook features an antenna tuner which includes a foward/reflected power meter, which is driven off something called a ``monimatch.'' since they give instructions on how to construct this device (it looks like a four inch length of small copper tube, flanked by two wires, with two strips of copper outside the wires. the rf signal passes through the copper tube), is it reasonable to assume these weren't available commercially?

the meter itself is driven from a diodes attached to either of the two wires, depending on whether you want to read forward or reflected power.

are there better ways of making an swr meter 26 years later? is there a place to buy items like the ``monimatch?''

brian

219. Re: monimatch?

Newsgroup: rec.ham-radio
Date: 1988-07-13 21:34:08 UTC
From: res1@mhuxu.UUCP
Message-ID: <7803@mhuxu.UUCP>
Source record: 19708
Cross-posted to: rec.ham-radio,sci.electronics

>
> are there better ways of making an swr meter 26 years later? is
> there a place to buy items like the ``monimatch?''

Today the monimatch type of swr bridge has pretty much given way to
the toroid transformer type of detector. The transmission line
goes through the core of a small donut, and the two small windings are
used for detecting the forward and reverse current, and detected with
diodes the same way as the monimatch. There are two advantages:
:the mechanical arrangement is simpler
the outputs are not dependent on frequency (well, not as much) so that
you get an output that you can calibrate as a power meter.
I built one and the mail problem with it is balancing it so that
reverse current is not detected by the forward meter and vice versa.
GL with it. 73 de KT2Q
--
Rick Stealey
{ihnp4}!mhuxu!res1

220. Re: Lightning rods. Was: Protecting computer equipment

Newsgroup: rec.ham-radio
Date: 1988-07-14 02:45:05 UTC
From: ornitz@kodak.UUCP
Message-ID: <1323@kodak.UUCP>
Source record: 19709
Cross-posted to: sci.electronics,rec.ham-radio

In article <432@ns.ns.com> logajan@ns.ns.com (John Logajan x3118) writes:
>In article <1314@kodak.UUCP>, ornitz@kodak.UUCP (barry ornitz) writes:
>> shown that the sharp point is not optimum but instead an elliptical point
>> should be used.
>> The article also debunks a number of myths about the "cone of protection"
>> and also about the neutralization of space charges
>
>I'm interested in this for reasons unrelated to the current discussion.
>Do you remember what was the basis for these statements?
>.....
>Anyhow, I would guess for a lightning rod you would want as steep a gradient
>as you could get. ...
>
>I don't know about the cone, but there must be some shape of protection around
>the rod, i.e. some area where it is easier to go to the rod than to some other
>structure.

John, you really need to read the whole article since it is far, far too long to fully discuss here. The full reference is: Moore, C. B.: Improved Configurations of Lightning Rods and Air Terminals, "Journal of the Franklin Institute," Vol. 315, No. 1, January 1983, pp 61-85, Pergamon Press, Oxford. My memory was mistaken on Moore's address. He is with the Langmuir Laboratory of the New Mexico Institute of Mining and Technology.

You have actually hit on the problem. The high gradient at the point causes breakdown of the air near the tip. The ion flow from the tip absorbs any increase in field strength above the ionization level. The point thus protects itself from further increases in field strength. The author of the article beleives the "cone of protection" exists, but it has a much smaller half-angle (probably around 22 degrees) than most people think. Some suggestions about the optimum rod are presented in the article that are quite useful. I would suggest that you find this article. I can photocopy it for you if your local library cannot find it (please send me a SASE). This article has both theory and experimental data sprinkled with some history. Even if Franklin got the sign wrong, most of his other work was right! :-)
Barry WA4VZQ


```
-----------------
| ___ ________ |
| | / / | | Dr. Barry L. Ornitz UUCP:...!rochester!kodak!ornitz
| | / / | | Eastman Kodak Company
| |< < K O D A K| | Eastman Chemicals Division Research Laboratories
| | \ \ | | P. O. Box 1972
| |__\ \________| | Kingsport, TN 37662 615/229-4904
| |
```

---

221. Re: monimatch?

Newsgroup: rec.ham-radio
Date: 1988-07-17 22:45:39 UTC
From: abostick@gethen.UUCP
Message-ID: <1076@gethen.UUCP>
Source record: 19710
Cross-posted to: rec.ham-radio,sci.electronics

In article <25048@ucbvax.BERKELEY.EDU> bks@ucbarpa.Berkeley.EDU (Brian K. Shiratsuki) writes:
>i'm interested in building an swr meter to use on amateur hf
>frequencies. a chapter of the 1962 edition of the Radio Amateur's
>Handbook features an antenna tuner which includes a foward/reflected
>power meter, which is driven off something called a ``monimatch.''
>since they give instructions on how to construct this device (it
>looks like a four inch length of small copper tube, flanked by two
>wires, with two strips of copper outside the wires. the rf signal
>passes through the copper tube), is it reasonable to assume these
>weren't available commercially?
>
>the meter itself is driven from a diodes attached to either of the
>two wires, depending on whether you want to read forward or reflected
>power.
>
>are there better ways of making an swr meter 26 years later? is
>there a place to buy items like the ``monimatch?''
>
> brian

Why bother constructing such a thing when you can buy them, or at least the parts that go into them, ready-made?

Minicircuits, a manufacturer of LOTS of nifty RF and microwave devices, has a line of "directional couplers" little (about 1 inch on a side) boxes with three BNC connectors on them. Signals going in one direction go from one port to the second, and signals travelling in the other direction go from the second to the third port. They are truly clever devices, based on diodes. I am told that they are similar in design to stuff which appears in ARRL handbooks, and may in fact be what you are talking about.

Sorry, I don't have Minicircuits ordering or catalogue info on hand. Check with a serious electronics supply store, or the catalogue shelf of just about any good electronics lab that works a lot with RF.

Alan Bostick
ucbvax!unisoft!gethen!abostick

222. 49 MHz wireless headsets

Newsgroup: rec.ham-radio
Date: 1988-07-18 19:56:13 UTC
From: dsp@oakhill.UUCP
Message-ID: <1389@oakhill.UUCP>
Source record: 19711
Cross-posted to: rec.ham-radio,sci.electronics

I need to find the schematics to Radio Shacks's 49 MHz wireless headsets.
Anybody out there have such info?? I have the newer 5 channel version.

Thanks in advance,

Charlie Thompson
(512) 892-6161

reply via UUCP to: ut-sally!oakhill!otis!charlie

223. Re: monimatch?

Newsgroup: rec.ham-radio
Date: 1988-07-20 15:55:59 UTC
From: WALT@MAINE.BITNET
Message-ID: <768WALT@MAINE>
Source record: 19712
Cross-posted to: rec.ham-radio,sci.electronics

> >are there better ways of making an swr meter 26 years later? is
> >there a place to buy items like the ``monimatch?''
> >
> > brian
>
>
> Why bother constructing such a thing when you can buy them, or at least
> the parts that go into them, ready-made?
>

Once upon a time, in a land far away, this is what much of Ham Radio
was all about...
W.

224. Re: monimatch?

Newsgroup: rec.ham-radio
Date: 1988-07-21 21:16:39 UTC
From: res1@mhuxu.UUCP
Message-ID: <7846@mhuxu.UUCP>
Source record: 19713
Cross-posted to: rec.ham-radio,sci.electronics

>
> Minicircuits, a manufacturer of LOTS of nifty RF and microwave devices,
> has a line of "directional couplers" little (about 1 inch on a side)
> boxes with three BNC connectors on them. Signals going in one direction
> go from one port to the second, and signals travelling in the other
> direction go from the second to the third port. They are truly clever
> devices, based on diodes.

Chances are the Minicircuits things cannot handle transmitter power.
Also, from your description, it sounds like the directional coupler
is a circulator.
But to answer your question as to why someone would build something
when he could buy it, the best reason I can think of is that it is
the best way to LEARN something, and it is extremely rewarding to
accomplish something !

--
Rick Stealey
{ihnp4}!mhuxu!res1

225. Need help with auto radio noise problem

Newsgroup: rec.ham-radio
Date: 1988-07-26 17:10:31 UTC
From: hpk@antique.UUCP
Message-ID: <2355@antique.UUCP>
Source record: 19714
Cross-posted to: rec.ham-radio,sci.electronics,rec.autos.tech

The factory installed radio in my 84 Camry has developed severe noise problems. The problem is intermittent: some days it works fine, on others I get a little static on both AM & FM, and on the worst days, there is lots of distortion on FM and more static on AM. Its built-in tape player always works fine. There may be some correlation between the radio not working and higher temperatures.

The radio is attached to a power antenna. Sometimes the antenna will not go down when the radio is shut off. It always goes up when the radio is powered on and down when the ignition is shut off. This problem has happened only a few times (and it usually works fine). I really don't care about this, but I mention it because it may be related to the noise problem.

In an attempt to isolate the problem, I have removed the radio and attached a different antenna (from my scanner radio through several patch cords): the noise is identical. I have tried jiggling all the wires under the dash and that has no effect.

Does anybody have suggestions on what to do? Does it sound like wiring in the car, or the radio itself?

I would be happy to take it to an good auto radio repair shop. Can anybody suggest one in or near Central New Jersey? I spoke with the car dealership. They ship their radios to Boston for repair.

--

Howard Katseff
Room 4F-605, AT&T Bell Laboratories, Holmdel, NJ 07733
vax135!hpk
201 949-5337

226. MOV's

Newsgroup: rec.ham-radio
Date: 1988-08-01 20:29:49 UTC
From: john@wa3wbu.UUCP
Message-ID: <614@wa3wbu.UUCP>
Source record: 19715
Cross-posted to: rec.ham-radio,sci.electronics

Can anyone privide me with an explaination of the operation of
Metal Oxide Varistors (MOV's) ? I'm mainly interested in confirming
something that I read which indicated a MOV was an accumulating device.
Such that if you had a 100 joule MOV, it could take a 100 joule hit or
two 50 joule hits. Does a MOV in fact accumulate its energy or does it
require an energy surge equal to its rating to damage it ? Any information
is appreciated. I'm mainly trying to characterize their usefulness in
surge protection devices. Thanks.

John

--
John Gayman, WA3WBU | UUCP: uunet!wa3wbu!john
1869 Valley Rd. | ARPA: wa3wbu!john@uunet.UU.NET
Marysville, PA 17053 | Packet: WA3WBU @ AK3P

227. International School Information Exchanges

Newsgroup: rec.ham-radio
Date: 1988-08-06 19:09:52 UTC
From: craig@n8ino.UUCP
Message-ID: <43@n8ino.UUCP>
Source record: 19716
Cross-posted to: rec.ham-radio,misc.wanted,comp.edu,news.admin

I am part of a group of people that have started an international educational organization dedicated to bringing students in different countries around the world together over the airwaves.

We "kicked off" the group about two months ago at NASA's JPL in Pasadena, CA. Our group, JPL, and Yaesu Electronics co-sponsored the event in which communications via sattelite was established between students in the US, South America, and Yugoslavia. This event was covered by various media representatives, including NewsLink.

If you have a class that would be interested in talking with classes (or students) in other parts of the world please contact me. I have information that I can send via US mail, or email. I also have some information geared to be presented to school boards and colleges.

If you know anyone else who may be interested in finding out more about this organization, please have them contact me.

Craig Peterson
601 Thames Dr.
Schaumburg, IL 60193

--
craig@n8ino.UUCP
--
R. Craig Peterson (N8INO)
mcdchg!n8ino!craig craig@n8ino.UUCP
E Pluribus Unum (NSA stuff - terrorist, DES, cipher, secret, NRO, CIA)

228. Re: 220 MHz: Reflections

Newsgroup: rec.ham-radio
Date: 1988-08-14 18:53:25 UTC
From: paulf@Jessica.stanford.edu
Message-ID: <3317@Portia.Stanford.EDU>
Source record: 19717
Cross-posted to: rec.ham-radio,news.admin

Note to Those Who Rule:

Apparrently, the FidoNet software doesn't have a one-liner filter. Please, if you're going to gate this stuff to USENET, make sure that the number of new lines equals or exceeds the number of lines in the posted article. Otherwise, shut the gateway down.

-=Paul Flaherty, N9FZX | "There is no distinctly American criminal class
->paulf@shasta.Stanford.EDU | except Congress." -- Mark Twain

229. Re: Wireless phone help needed

Newsgroup: rec.ham-radio
Date: 1988-08-25 20:41:06 UTC
From: jpederse@encad.Wichita.NCR.COM
Message-ID: <475@encad.Wichita.NCR.COM>
Source record: 19718
Cross-posted to: rec.ham-radio,sci.electronics

In article <5953@batcomputer.tn.cornell.edu> brucef@tcgould.tn.cornell.edu (Bruce FIngerhood) writes:
|>
|>Also, does anyone know if there is a publicly accessable
|>database for the FCC ID number found on consumer electronics?
|>Conceivably one could find the address of the manufacturer/importer
|>of a piece of equipment through such number.

This is how the FCC Public Access Link works for license numbers for Class B computing devices. (We use it to find out whether or not the FCC has issued, or approved, a Class B application). I haven't tried to feed it any numbers other than these but I think the thing is set up entirely for Class B licenses.

--
John.Pedersen@Wichita.NCR.COM N5DKQ
NCR Engineering & Manufacturing
EMC Engineering Wichita KS
316-636-8837

230. Make a Wish Come True

Newsgroup: rec.ham-radio
Date: 1988-09-02 12:01:58 UTC
From: Nanook@cup.portal.com
Message-ID: <8684@cup.portal.com>
Source record: 19719
Cross-posted to: comp.misc,rec.ham-radio

Make a wish come true....

This message may not belong in the group in which I'm posting it, but please do not flame me. When I heard this story, I decided to pass the word along to everyone and posting it in many of the major groups seemed to be the best way to accomplish that end.

A young boy named David is dying. He has an incurable disease. He only wants one thing before he dies. His wish is to be recorded in the Guiness Book of World Records as being the person to have received the most post cards ever. To this end I'm posting to everyone on the net requesting that you send David a post card to help him get his wish. I would also appreciate it if you would foreward this message to any local BBS's or news groups who may not get these news feeds.

If you wish to mail a post card to David you may send it to the following address:

David
c/o Aline Morin
Make A Wish Foundation
1820 Arabin Rd
West Palm Beach, Fl. 33406

Please send a card and help David's wish come true!

Nanook of the South
Nanook@cup.portal.com
uunet!portal!nanook

231. Radio Wavicles

Newsgroup: rec.ham-radio
Date: 1988-09-02 17:38:26 UTC
From: logajan@ns.UUCP
Message-ID: <805@ns.UUCP>
Source record: 19720
Cross-posted to: rec.ham-radio,sci.electronics

We generally associate radio transmission with wave properties. But we also know that such emissions have photonic-particle like properties.

The point I have trouble seeing is how to explain continuous frequency change in terms of discrete photons. Frequency shifting is easy to visualise from a waveform point of view -- but in a particle point of view, isn't one forced to make the assumption that frequency shifting can only occur in quantum steps -- that there is no such thing as a continuously smooth frequency change.

Perhaps I should have used the term "discrete steps" rather than quantum steps, since I didn't mean to imply that each step was constrained to be any specific "leap" from the previous.

--
- John M. Logajan @ Network Systems; 7600 Boone Ave; Brooklyn Park, MN 55428 -
- {...rutgers!dayton, ...amdahl!ems, ...uunet!rosevax!mmm} !viper!ns!logajan -

232. Re: Make a Wish Come True

Newsgroup: rec.ham-radio
Date: 1988-09-03 17:45:48 UTC
From: trey@ut-emx.UUCP
Message-ID: <5698@ut-emx.UUCP>
Source record: 19721
Cross-posted to: comp.misc,rec.ham-radio

In article <8684@cup.portal.com>, Nanook@cup.portal.com writes:
> Make a wish come true.... [...]
>
> Please send a card and help David's wish come true!
>
Sheesh! Where do these people come from?

Trey Garlough, WN4KKN/5
Computation Center, The University of Texas at Austin, Austin, Texas 78712
ARPA: trey@emx.UTEXAS.EDU UUCP: {harvard,allegra,gatech}!ut-sally!ut-emx!trey

233. SpaceNews 9/5/88

Newsgroup: rec.ham-radio
Date: 1988-09-03 20:18:28 UTC
From: kd2bd@ka2qhd.UUCP
Message-ID: <587@ka2qhd.UUCP>
Source record: 19722
Cross-posted to: rec.ham-radio,sci.space.shuttle

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SpaceNews
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MONDAY SEPTEMBER 5, 1988

SpaceNews originates at KD2BD in Wall Township, NJ, and is available on
packet radio bulletin board stations across North America and Canada, as
well as the MTTBS telephone BBS at (201) 494-3649.

** HAPPY LABOR DAY! **

* SHUTTLE DISCOVERY NEWS *
--------------------------
Workers at pad 39-B are busy connecting the Tracking and Data Relay
Satellite/Inertial Upper Stage (TDRS/IUS) to the shuttle. An interface
verification test of those connections was planned on Friday. Post-FRF
main engine and main propulsion system checks are continuing. Leak checks
of the main engine heat exchangers are continuing. Inspections and repairs
of orbiter and external tank thermal protection systems are underway.

* TRACKING SHUTTLE FLIGHTS *
----------------------------
The Space Shuttles provide the opportunity for men to venture over
and over into space for periods of up to 14 days. As the Shuttle orbits
the earth, it passes over many countries on each orbit.
NASA's Shuttle Prediction and Recognition Kit (SPARK) provides an
easy-to-understand procedure to predict shuttle orbits and visibility times.
Information is given on how to recognize the shuttle in the night sky
and how to take a photograph of a Shuttle pass. While the Mission
Control Center in Houston, Texas keeps track of the crew and their
experiments, you can determine if the Shuttle will pass over your home
town.

Along with a SPARK Kit, you will also need a Space Shuttle Mission Chart,
that contains plots of every orbit the Shuttle will make during a mission.
Since the September 25th launch date is still in question, it's best to hold
off on sending for your Mission Chart. Request your SPARK Kit by writing:

SPARK
AP4
NASA Johnson Space Center
Houston, Texas 77058 USA

* MICROSAT LAUNCH NEWS *
------------------------
```

A total of six "MicroSat" amateur satellites are being built for a launch in June 1989. The launch will take place on Ariane mission V-34 carrying a SPOT-2 primary payload. The MicroSats will be injected into a sun-synchronous, circular orbit having an altitude of 822 km and an inclination of 98.7 degress.

Three of the six MicroSats will carry packet radio equipment. These "PACSATs" are being built by AMSAT-NA, AMSAT-LU and AMSAT-UK along with the University of Surrey (UoSAT-D). The Center for Aerospace Technology (CAST) at Weber State College, Ogden, Utah and Surrey's UoSAT-E will carry low-cost CCD video earth imaging payloads in space. BRAMSAT (Brazil's AMSAT) is working on Project DOVE (Digital Orbiting Voice Encoder), a space education payload that will use Votrax speech synthesis to transmit spoken messages to earth in several languages in an effort to promote peace between nations. Project DOVE, or "Peace Talker" will also transmit valuable spacecraft telemetry using voice synthesis and use frequencies and power levels suitable for reception by a wide audience of listeners using low-cost "scanner" type FM receivers.

* OSCAR-9 OPERATIONS *

The Diary will transmit a CCD video image all day Wednesday and downlink plain-english telemetry using the "Digitalker" from 00:00 until 14:00 UTC this Thursday. From 18:00 UTC Thursday until 00:00 UTC next Tuesday, the Diary will transmit a sequence of TELEMETRY, BULLETIN, & WHOLE ORBIT DATA (WOD) surveys using 1200 baud ASCII on 145.825 MHz.

Command Diary V1.1 is currently in operation. The 21.002 MHz and 14.002 MHz CW beacons are ON the air, transmitting 10 WPM morse telemetry.

* OSCAR-10 NEWS *

AMSAT-OSCAR 10 is OUT OF SERVICE until further notice.

* RS10/11 OPERATIONS *

For the time being, RS11 will be in operation. The Mode A transponder and ROBOT will be available all the time. Mode K operations, however will be made available Tuesdays through Fridays each week. There are no plans for Mode T operations at present.

* OSCAR-12 OPERATIONS *

Here is the FO-12 operating schedule:

From	At	Mode
03Sep	07:58 UTC	JA
05Sep	02:01 UTC	D
07Sep	06:23 UTC	JA
08Sep	05:29 UTC	D
10Sep	05:43 UTC	JA

```
-------------------------

...where Mode JA is the Analog Mode
and Mode D is where all systems are OFF.

The transponders will be OFF at other times. The operating schedule could
change as the result of unexpected situations such as variations in
available power.

Mode JA Beacon : 435.795 MHz
Mode JD Beacon : 435.910 MHz

* OSCAR-13 NEWS *
-----------------
The following operating schedule should remain in effect until September 21.
RUDAK testing continues and operations are pending their outcome. Mode S
operations are expected to begin soon.

Mode Mean Anomaly Comments
----+---------------+------------------
OFF : 241 to 002 : Eclipse window
B : 003 to 099 :
L : 100 to 150 : Mode JL optional
B : 151 to 240 : 224-032: omni ant
---------------------------------------

The sum of uplink and downlink frequencies equals a constant:

Mode B: 581.398 MHz
Mode J: 580.413 MHz
Mode L: 1205.356 MHz

This schedule may change without notice due to engineering tests and
measurements.

* MIR NEWS *
------------
Two Cosmonauts were launched to the Soviet MIR space station last week
aboard a SOYUZ TM-6 spacecraft. K1KSY reported hearing VHF communications
from SOYUZ TM-6 on 121.750 MHz FM.

On August 30, 1988, NASA issued a special notice stating that object
17851, the Soviet KVANT SERVICE MODULE, decayed in the earth's atmosphere on
August 25th.

The 143.625 MHz FM voice downlink from MIR continues to remain active,
carrying both voice (Russian) and data (RTTY) transmissions. These signals
are easily heard on scanners or 2-meter FM equipment capable of tuning just
below 144 MHz.

Amateur Satellite Report (AMSAT-NA) # 176 reported that according to
John Biro, K1KSY, the following frequencies are used by the Soviets
in connection with the MIR space station:
```

143.625 MHz : WBFM voice downlink.
166.000 MHz : Wideband telemetry; may be KVANT ot SOYUZ TM-4; Tune to
165.875 or 166.130 MHz where signal power is at end points.
247.500 MHz : Wideband FM telemetry 250 KHz wide from KVANT service pod.
922.755 MHz : 10 Watt CW from SOYUZ TM-4.
925.250 MHz or 925.260 MHH- Progress 36T?
19.954 MHz : +/- 1 KHz FSK from COSMOS 1686, an add-on module to
Salyut 7.

* FEEDBACK WELCOMED *

Feedback regarding SpaceNews should be directed to: John, KD2BD @ NN2Z.
The NN2Z-4 BBS and TCP/IP Gateway is located in Neptune, NJ.

* SOURCES *

Some of the news contained in this SpaceNews issue was obtained via
OSCAR-9, OSCAR-11, the KA2QHD PBBS, and "Amateur Satellite Report".

* MESSAGES de KD2BD *

>> ALL : Look for Keplerian orbital data by KD2BD on your BBS.

>> SpaceNews is a production of KD2BD Software. All rights reversed. <<

<eof>

234. Re: Make a Wish Come True

Newsgroup: rec.ham-radio
Date: 1988-09-03 21:47:21 UTC
From: jesup@cbmvax.UUCP
Message-ID: <4658@cbmvax.UUCP>
Source record: 19723
Cross-posted to: comp.misc,rec.ham-radio

Not again! Here goes yet another portal person, doing it again.

For those that don't remember, this hoax has gone by before, a few months or a year ago, in (I think) misc.misc, or some such. I wish portal would screen their users a bit, or reduce their use of aliases.

--
Randell Jesup, Commodore Engineering {uunet|rutgers|allegra}!cbmvax!jesup

235. Re: Make a Wish Come True

Newsgroup: rec.ham-radio
Date: 1988-09-03 23:18:19 UTC
From: jdu@ihopa.ATT.COM
Message-ID: <694@ihopa.ATT.COM>
Source record: 19724
Cross-posted to: comp.misc,rec.ham-radio

In article <8684@cup.portal.com>, Nanook@cup.portal.com writes:
> Make a wish come true....
>
> This message may not belong in the group in which I'm posting it, but please
> do not flame me. When I heard this story, I decided to pass the word along
> to everyone and posting it in many of the major groups seemed to be the best
> way to accomplish that end.
>
> A young boy named David is dying. He has an incurable disease. He only wants
> one thing before he dies. His wish is to be recorded in the Guiness Book of
> World Records as being the person to have received the most post cards ever.
> To this end I'm posting to everyone on the net requesting that you send David
> a post card to help him get his wish. I would also appreciate it if you would
> foreward this message to any local BBS's or news groups who may not get these
> news feeds.
>

Didn't this show up a few months ago, and then we had a "stop - he has
received too many cards" message?

--
John Unruh
AT&T-Bell Laboratories
ihnp4!ihlpx!jdu
(312)979-6765

236. Re: Make a Wish Come True

Newsgroup: rec.ham-radio
Date: 1988-09-04 04:07:35 UTC
From: sampson@killer.DALLAS.TX.US
Message-ID: <5407@killer.DALLAS.TX.US>
Source record: 19725
Cross-posted to: comp.misc,rec.ham-radio

In article <694@ihopa.ATT.COM>, jdu@ihopa.ATT.COM (John Unruh, NY9R) writes:
> In article <8684@cup.portal.com>, Nanook@cup.portal.com writes:
> > Make a wish come true....
> >
> > A young boy named David is dying.
>
> Didn't this show up a few months ago, and then we had a "stop - he has
> received too many cards" message?
>
I wish he would kill himself and get it over with! This mother****er is
probably responsible for suckering 20 people on the Portal system. What?
Send the guy a gun, he's got enough cards.

237. Re: Make a Wish Come True

Newsgroup: rec.ham-radio
Date: 1988-09-04 09:50:13 UTC
From: zentrale@rmi.UUCP
Message-ID: <1174@rmi.UUCP>
Source record: 19726
Cross-posted to: comp.misc,rec.ham-radio

In article <8684@cup.portal.com> Nanook@cup.portal.com writes:
: Make a wish come true....
[...]
: A young boy named David is dying. He has an incurable disease. He only wants
[...]
: Please send a card and help David's wish come true!

again and again and [...]

dl3no

238. Re: Make a Wish Come True

Newsgroup: rec.ham-radio
Date: 1988-09-04 15:10:40 UTC
From: robert@pvab.UUCP
Message-ID: <312@pvab.UUCP>
Source record: 19627
Cross-posted to: comp.misc,rec.ham-radio

In article <5698@ut-emx.UUCP>, trey@ut-emx.UUCP (Trey Garlough, WN4KKN) writes:

> In article <8684@cup.portal.com>, Nanook@cup.portal.com writes:

> > Please send a card and help David's wish come true!

> Sheesh! Where do these people come from?

Jay-Jay & friends?

239. Re: Radio Wavicles

Newsgroup: rec.ham-radio
Date: 1988-09-04 16:42:07 UTC
From: keithl@vice.ICO.TEK.COM
Message-ID: <2812@vice.ICO.TEK.COM>
Source record: 19628
Cross-posted to: rec.ham-radio,sci.electronics

"Continuous" frequency change, as in swept frequencies or FM, is a reasonably accurate *approximation*. At radio frequencies of 1 GHz, an energy quanta is 6.6E-25 Joules. Thermal noise at 300 Kelvin is around 4e-21 Joules, about 6000 times larger. We can't see the quanta; they are buried in noise. It's easier just to ignore the quantum effects unless the frequencies are higher or the temperatures are lower.

--
Keith Lofstrom ...!tektronix!vice!keithl keithl@vice.TEK.COM
MS 59-316, Tektronix, PO 500, Beaverton OR 97077 (503)-627-4052

240. Re: Make a Wish Come True (Urban Myth)

Newsgroup: rec.ham-radio
Date: 1988-09-05 03:49:15 UTC
From: lindsay@dscatl.UUCP
Message-ID: <10496@dscatl.UUCP>
Source record: 19629
Cross-posted to: comp.misc,rec.ham-radio

In article <8684@cup.portal.com> you write:
>Make a wish come true....
>
>A young boy named David is dying. He has an incurable disease.
>
>Please send a card and help David's wish come true!
>
>Nanook of the South
>Nanook@cup.portal.com
>uunet!portal!nanook

Gee...the "Dying David" joke (?!) usually takes a couple of years between appearances on the net...but this time it has been only a few months since its previous ressurection and interrment!

Perhaps this short length between trying to gull the innocent is in itself a record of sort! :-)

Cheers,
Lindsay

Lindsay Cleveland Digital Systems Co. Atlanta, Ga
gatech!dscatl!lindsay (404) 497-1902
(U.S. Mail: PO Box 1140, Duluth, GA 30136)

241. Re: Make a Wish Come True

Newsgroup: rec.ham-radio
Date: 1988-09-05 09:32:30 UTC
From: ewhac@well.UUCP
Message-ID: <7029@well.UUCP>
Source record: 19630
Cross-posted to: comp.misc,rec.ham-radio,rec.humor

[Where was I going again?..... Oh yeah! Grandma's house!]

Greetings citizens of the Net. My name is Smedley Suckerbait. I am dying of an incurable disease. I have a last wish to make, which you can help me make come true. Before I pass from this life, I want to get into the Guiness Book of World Records as the person to have owned the greatest ever number of one megabit DRAMs.

Please send your DRAMs (no SIMM's, please) to:

Smedley Suckerbait
c/o well!ewhac@ucbvax.Berkeley.EDU

Help me to die a happy man. Thank you.

_-_-_-

242. Re: Radio Wavicles

Newsgroup: rec.ham-radio
Date: 1988-09-05 23:51:22 UTC
From: markz@ssc.UUCP
Message-ID: <1447@ssc.UUCP>
Source record: 19631
Cross-posted to: rec.ham-radio,sci.electronics

In article <805@ns.UUCP>, logajan@ns.UUCP (John Logajan x3118) writes:
| We generally associate radio transmission with wave properties. But we
| also know that such emissions have photonic-particle like properties.
|
| The point I have trouble seeing is how to explain continuous frequency
| change in terms of discrete photons. Frequency shifting is easy to
| visualise from a waveform point of view -- but in a particle point of
| view, isn't one forced to make the assumption that frequency shifting
| can only occur in quantum steps -- that there is no such thing as a
| continuously smooth frequency change.
|
| Perhaps I should have used the term "discrete steps" rather than quantum
| steps, since I didn't mean to imply that each step was constrained to be
| any specific "leap" from the previous.

Photon energy (in Joules) = 6.6256e-34 (Planck's Constant) * frequency (hz)

Pretty small steps.

Mark Zenier uunet!pilchuck!ssc!markz
"He did decide, though, that with more time and a great deal of mental effort,
he could probably turn the activity into an acceptable perversion"-Mick Farren

243. Re: Make a Wish Come True

Newsgroup: rec.ham-radio
Date: 1988-09-06 02:01:36 UTC
From: schuster@dasys1.UUCP
Message-ID: <6262@dasys1.UUCP>
Source record: 19632
Cross-posted to: comp.misc,rec.ham-radio

In article <8684@cup.portal.com> Nanook@cup.portal.com writes:
>Make a wish come true....
[crap about not flaming the author has been deleted...]
>A young boy named David is dying. He has an incurable disease. He only wants

Why do people insist on littering the nets with this crap? This hoax keeps returning, like a bad nightmare, every few months. It has been debunked on this net and the FIDO net of BBS systems, time and time again.
Rather than sending a postcard to "David", let's email protests to the folks who propagate this drivel.

--
l\ /l' _ Mike Schuster {sun!hoptoad,cmcl2!phri}!dasys1!schuster
l \/ lll/(_ Big Electric Cat schuster@dasys1.UUCP
l lll\(_ New York, NY USA DELPHI,GEnie:MSCHUSTER CIS:70346,1745

244. Re: Make a Wish Come True (Urban Myth)

Newsgroup: rec.ham-radio
Date: 1988-09-06 13:09:58 UTC
From: peter@edsews.EDS.COM
Message-ID: <1911@edsews.EDS.COM>
Source record: 19633
Cross-posted to: comp.misc,rec.ham-radio

In article <8684@cup.portal.com> you write:
>Make a wish come true....
>
>A young boy named David is dying. He has an incurable disease.
>
>Please send a card and help David's wish come true!
>
>Nanook of the South
>Nanook@cup.portal.com
>uunet!portal!nanook

Hey Nanook get this message out of crontab, oncea yearis O.K., but
every other month is too much.

Peter Zadrozny peter@edsews.eds.com
Oh my god, he can speak!!! uunet!edsews!peter
Yeah, but don't tell anyone, he'll get fired (313) 645-4725

---

245. Re: Make a Wish Come True

Newsgroup: rec.ham-radio
Date: 1988-09-06 16:35:23 UTC
From: stox@ttrde.UUCP
Message-ID: <697@ttrde.UUCP>
Source record: 19634
Cross-posted to: comp.misc,rec.ham-radio

In article <8684@cup.portal.com>, Nanook@cup.portal.com writes:
>
> A young boy named David is dying. He has an incurable disease. He only wants
> one thing before he dies. His wish is to be recorded in the Guiness Book of
> World Records as being the person to have received the most post cards ever.
> To this end I'm posting to everyone on the net requesting that you send David
> a post card to help him get his wish. I would also appreciate it if you would
> foreward this message to any local BBS's or news groups who may not get these
> news feeds.
> uunet!portal!nanook

OH NO!!, are we going to go through with this again. I would think that
everyone had caught on to this silly scam a long time ago. I do wish that
this BOZO would not waste our time and bandwidth.

Also, it seems that a large percentage of postings like this seem to
originate from portal. Am I being fair in saying this ??

STOP useless meaningless wastes of time, bandwidth, and disk usage !!!!

JUST SAY NO TO NANOOK OF THE NORTH !!!!

** I'm sorry for this folks, but if I see this one more time, I'm going
to blow my stack !!! **

246. Re: Make a Wish Come True

Newsgroup: rec.ham-radio
Date: 1988-09-06 21:06:07 UTC
From: sorgatz@ttidca.TTI.COM
Message-ID: <3138@ttidca.TTI.COM>
Source record: 19635
Cross-posted to: comp.misc,rec.ham-radio

In article <4658@cbmvax.UUCP> jesup@cbmvax.UUCP (Randell Jesup) writes:
>Not again! Here goes yet another portal person, doing it again.
>
This poor dweeb is most likely some assistant operator-person/tape
ape/paper-jerker..hasn't been given the brainpower of a punched card and
yet is grimly determined to be a do-gooder...wunnerful!

>in (I think) misc.misc, or some such. I wish portal would
>screen their users a bit, or reduce their use of aliases.

You are dreaming. As long as the computing resources of major
universities are made available to non-tech people this kind of crap
will continue. It reminds me a great deal of the miserable use being
made of a band of frequencies just below 10 meters...!

DEATH TO BOOTLEGGERS!
--
-Avatar-> (aka: Erik K. Sorgatz) KB6LUY +-------------------------+
Citicorp(+)TTI *----------> panic trap; type = N+1 *
3100 Ocean Park Blvd. (213) 450-9111, ext. 2973 +-------------------------+
Santa Monica, CA 90405 {csun,philabs,randvax,trwrb}!ttidca!ttidcb!sorgatz **

247. Re: Make a Wish Come True

Newsgroup: rec.ham-radio
Date: 1988-09-07 12:29:26 UTC
From: larry@pdn.UUCP
Message-ID: <4252@pdn.UUCP>
Source record: 19636
Cross-posted to: comp.misc,rec.ham-radio

In article <697@ttrde.UUCP> stox@ttrde.UUCP (Kenneth P. Stox) writes:
>In article <8684@cup.portal.com>, Nanook@cup.portal.com writes:
>> A young boy named David is dying.... [etc, ad nauseum]
>> uunet!portal!nanook

>everyone had caught on to this silly scam a long time ago. I do wish that
>this BOZO would not waste our time and bandwidth.

Can someone identify, on the net for all to see, who "nanook" is? A more personal identification of an individual who cares so little about his fellow netters may have a more desired effect.

Larry Swift UUCP: {peora,uunet}!pdn!larry
Paradyne Corp., LF-207 Phone: (813) 530-8605
P. O. Box 2826
Largo, FL, 34649-9981 She's old and she's creaky, but she holds!

248. Radio Wavicles and Modulation

Newsgroup: rec.ham-radio
Date: 1988-09-09 16:30:11 UTC
From: logajan@ns.UUCP
Message-ID: <818@ns.UUCP>
Source record: 19637
Cross-posted to: rec.ham-radio,sci.electronics

Okay, I can see RF photons traveling between transmitter and receiver, and I can see the current flow into and out of the xmit and recv antennae. I see that each photon is of specific frequency, but I also see explanations that modulated RF is composed of multiple frequencies.

So is the antenna producing vastly different frequency photons simultaneously? How is this possible? Wouldn't the current flow conditions in an antenna only give rise to one frequency of photon at any given instant?

Actually, I am confused about the whole antenna/photon interface. Do photons come off at random times or is their departure correlated somehow to the phase of antenna current -- sort of a burst mode (I doubt this.)

But maybe this is all too narrow of a view, perhaps there is a lumpiness in the current flow in an antenna -- (with a corresponding lumpiness of voltage distribution, I am not trying to overlook the electro part of the electro-magnetic effect, just a form of shorthand notation.) The lumpiness correlates to the number of frequencies being transmitted simultaneously, and the photons are being created by these local variations along with all the global interactions. What am I talking about?

--
- John M. Logajan @ Network Systems; 7600 Boone Ave; Brooklyn Park, MN 55428 -
- {...rutgers!dayton, ...amdahl!ems, ...uunet!rosevax!mmm} !viper!ns!logajan -

249. Final chapter (I hope) on "Make a Wish..."

Newsgroup: rec.ham-radio
Date: 1988-09-14 22:01:20 UTC
From: winter@Apple.COM
Message-ID: <17127@apple.Apple.COM>
Source record: 19638
Cross-posted to: comp.misc,rec.ham-radio

When I first saw "Nanook's" posting about the dying child in Florida who wanted to receive cards and letters, I reacted as most netters evidently did: "Oh no, not again..."

However, unlike the "Little David in Scotland" posting that made the rounds here some months back, Nanook's mentioned an actual organization, the Make-A-Wish Foundation. Since I've had some contact with MAW, I didn't want their good name to be sullied if this was a scam.

So I called the local MAW director and asked him to research the facts as given in Nanook's posting. He, in turn, called the MAW office nearest to W. Palm Beach, Florida (the address mentioned in the posting). Here's what he found out:

* The MAW staffers in the area say that the story is real. There really is a local child named David who is dying of leukemia and has stated a wish to receive cards.

* However, MAW is not involved at all in this effort. They presume that the address given is that of the child's family or a friend.

It's unfortunate that because of past experiences with such urban myths as Little David in Scotland (which may or may not have been true at one time, but evidently that was years ago if ever), most of us tend to assume that similar stories are also false. Quite frankly, it didn't help the situation that the posting was made by someone who chose to use an alias instead of his/her real name, and who was coming onto the net from a host that has been the source of previous bogus or ill-advised postings. (Most notably "JJ" and his request for money.)

So I hope that if anyone in netland got a bad impression of the Make-A-Wish Foundation, that this will rectify it. Incidentally, I understand that "20/20" did a story last week on a supposedly similar group that appears to be a scam. I personally have seen donation cans in local stores (something MAW never does) for a group with a similar-sounding name; that group is currently under investigation by the DA's office in their home county. I can only presume that their name was intentionally chosen to reap the benefits of MAW's good reputation.

Now then, maybe we can go back to discussing amusing incidents
with computers (comp.misc), and how to keep the FCC from giving
away our spectrum (rec.ham-radio)!! :-)

Patty

==
Patty Winter N6BIS DOMAIN: winter@apple.com
AMPR.ORG: [44.4.0.44] UUCP: {decwrl,nsc,sun}!apple!winter
==

250. Shuttle Frequencies Wanted

Newsgroup: rec.ham-radio
Date: 1988-09-15 19:45:29 UTC
From: chguest@pioneer.arc.nasa.gov.arpa
Message-ID: <14945@ames.arc.nasa.gov>
Source record: 19639
Cross-posted to: sci.space.shuttle,rec.ham-radio,ba.general,ca.general

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
I would like to know of any plans to rebroadcast the Space Shuttle
communications for the next flight...late sept(?).

If you have information on frequencies or times of broadcast I would
be gratefull if you would let me know.

Also if you have any knowledge of voice links and frequencies I would
like to have those as well.

Thank you
CJG

xxxxxxxxxx

```
************************************************************
* OVERAL AND ALL INCLUSIVE DISCLAIMER: *
* (except for what I left out and meant to say) *
* The above reply/article is my opinion **only* *
* True and articulable facts had no bearing on *
* the above statements. 8=) :-) :-> *
************************************************************
```

251. Re: Shuttle Frequencies Wanted

Newsgroup: rec.ham-radio
Date: 1988-09-16 20:02:41 UTC
From: mjj@stda.jhuapl.edu
Message-ID: <1893@aplcomm.jhuapl.edu>
Source record: 19640
Cross-posted to: sci.space.shuttle,rec.ham-radio

In article <14945@ames.arc.nasa.gov> chguest@nike.UUCP
(Charles Guest RCE) writes:
>I would like to know of any plans to rebroadcast the Space Shuttle
>communications for the next flight...late sept(?).

According to latest information I have, these are the frequencies to
be used by WA3NAN at Goddard Space Flight Center, Greenbelt, MD:

3.960 MHz
7.185 MHz
14.295 MHz
21.295 MHz (recently changed from 21.390 MHz)
28.650 MHz
147.450 MHz

I regret ignorance of the downlink details or the shuttle-borne ham
equipment. Contact GSFC for more information.

Marshall Jose, WA3VPZ
mjj@aplvax.jhuapl.edu || ...mimsy!aplcen!aplvax!mjj

252. buying my first scanner

Newsgroup: rec.ham-radio
Date: 1988-09-19 15:20:32 UTC
From: nebezene@ndsuvax.UUCP
Message-ID: <1313@ndsuvax.UUCP>
Source record: 19641
Cross-posted to: sci.electronics,rec.ham-radio

I am in the market for my first VHF/UHF scanner. I would like to buy the right one for me the first time. Please send me some advice, conforming to the following parameters:

o I want a desktop model. Preferably one that would fit easily into a car.

o I would like to have the best frequency range possible. This includes the 800 MHz cellular band.

o I would like to keep the cost down. This could be done by eliminating bell and whistles. I really do not need 200+ channels, etc.

Any replies are greatly appreciated. Special hints (i.e. "Get one that covers such and such. One would be ...") would also be welcomed.

Thanks a bunch,
Todd
--
Todd Michael Bezenek, KO0N
UUCP: nebezene@plains.nodak.edu
Bitnet: nebezene@ndsuvax

253. Re: About to buy radio... actually about NiCds

Newsgroup: rec.ham-radio
Date: 1988-09-20 14:56:58 UTC
From: rusty@cadnetix.COM
Message-ID: <4111@cadnetix.COM>
Source record: 19642
Cross-posted to: rec.ham-radio,sci.electronics

In article <26117@ucbvax.BERKELEY.EDU> bks@ucbarpa.Berkeley.EDU.UUCP (Brian K. Shiratsuki) writes:
>... a lot of stuff about radios.... deleted<
>i put nicads into the case, and clipped some plastic off the case
>which prevent use of the charger. this gave me an extra pack for
>$26; we'll see if i have to make up the difference or more later.
>
The most recent issue of Ham Radio Magazine had a really nifty
article about NiCd batteries and how to charge them correctly.
There is a lot of info in the article about sintered-plate
NiCds which I will not go in to here. Lets just say that,
after my experiences with NiCds I believe him. Also, for those
of you who agree with me that NiCds are the pits and almost
don't last long enough to make their cost worth it... He has
a sintered-plate nicd battery which is quite old (from
a very poor memory I remember considerably more than 5 years
old for that battery), and it will still start a car!

Anyway, the article gives a VERY easy to build NiCd charger
which is claimed to not ruin your NiCds, and which is claimed
to be able to un-reverse reversed cells (as long as the
batteries are not already ruined by overheating, I assume).
I have an 8-cell pack for my Kenwood 2M transciever which has
2 reversed cells... I will report back to the net how it goes
with the attempt to reverse the cells.

The only problem I had with the construction of the project
was with the quality of my junkbox parts (some of my high-current
diodes were bad), and discovering that those pesky little tantalum
capacitors like to short out when you hit them with the output
of an overloaded (i.e. oscillating) LM317. Poof, smoke, stink!
(One of these days I will get the right size fuse! :~>)
(holding my nose ^)

(If this works, I'm gonna have to build a BUNCH of these buggers!
Each one designed for the battery pack it is to recharge.....
Who knows, I might even start liking NiCds again!)

Rusty Carruth UUCP: {uunet,boulder}!cadnetix!rusty DOMAIN: rusty@cadnetix.com
Cadnetix Corp. (303) 444-8075x296 \ 5775 Flatiron Pkwy. \ Boulder, Co 80301
Radio: N7IKQ 'home': P.O.B. 461 \ Lafayette, CO 80026

254. Diversity reception for UHF

Newsgroup: rec.ham-radio
Date: 1988-09-20 15:27:54 UTC
From: jbn@glacier.STANFORD.EDU
Message-ID: <17722@glacier.STANFORD.EDU>
Source record: 19643
Cross-posted to: rec.ham-radio,sci.electronics

I'm struggling with the problems of getting high-quality video
from a mobile robot. I'm using FM TV on 1258.25MHz at 20 milliwatts.
I have plans to increase this to one watt, but as yet have not done so.
The receiver, at most a hundred feet away, but often with some
intervening walls, has a low-noise GaAs FET preamp at the antenna, which
is just a quarter-wave whip with a ground plane. All antennas are omni
directional, of course. (Actually, I've been using a 50-ohm dummy load
on the transmitter for this short-range testing. When I go to higher power,
I hope to increase the range to a thousand feet or so.)

Generally, results are good, but there are occasional losses of signal
as the transmitter moves. These are presumably due to reflections. When
at a null, moving the receiving antenna a few inches usually clears up the
problem. Since the wavelength is 23cm, this is not suprising.

So I'm thinking about diversity reception. My first thought was to
get a second receiver, bring out the AGC lines from both, feed them into
a comparator, inserting a little hysteresis to avoid excessive switching,
and use the output to control analog switches on the video output.
Are techniques such as this ever used by hams in ATV? Is it necessary to
extract the sync and constrain the switches to occur during the vertical
interval? Would it be better to switch at the IF level, rather than
at the video output? And what analog switches are suitable for video
switching? Advice would be appreciated.

Incidentally, this is not a ham activity, but an experimental one,
under Part 5 (experimental), licenced as KA2XXF.

I'm still looking for a 1200MHz 1 watt power amp, by the way. 5 watts
I can get, but that's overkill, and the unit is too big. Suggestions?
And, please, if you suggest some vendor so tiny they're not in Thomas's
Register, give a phone number or address. Everybody talks about those
Mitsubishi RF bricks, but no one seems to actually sell them.

John Nagle

255. Re: About to buy radio... actually about NiCds

Newsgroup: rec.ham-radio
Date: 1988-09-21 22:46:56 UTC
From: gmg@hcx.uucp
Message-ID: <725@cseg.uucp>
Source record: 19644
Cross-posted to: rec.ham-radio,sci.electronics

I don't know if this is possible, but I am involved in the electronic scale business, and we were having battery problems, so we just pitched the factory batteries and started using gel cel batteries! These lasted about 10 times as long as the original batteries (I don't know if the originals were nicads or not), and they never stopped working. We were very satisfied with them. Radio Electronics published a nice article on how to build a gel-cel charger using a lm317 and some other stuff, and we built several of these and sold them to our customers! Try it1

Greg Garner
gmg@hcx.uucp

256. Info on the all digital Code-A-Phone 6200 answering machine?

Newsgroup: rec.ham-radio
Date: 1988-09-23 01:45:34 UTC
From: leres@ace.ee.lbl.gov
Message-ID: <997@helios.ee.lbl.gov>
Source record: 19645
Cross-posted to: rec.ham-radio,sci.electronics

I was at Whole Earth in Berkeley yesterday and saw the latest in answering machine technology. Like other machines, the greeting message is stored digitally. In addition, incoming messages are also kept in ram! (7 messages of 18 seconds each.) One obvious advantage is that you can instantly seek to any message.

Does anyone have the schematics on this unit yet? I'm curious to see if it would be hard to add more ram to increase the length and number of incoming messages. I'd also be interested in learning how much ram it has (I want to estimate the sampling rate for the audio).

Craig

257. Re: NiCds and the charger in Ham Radio Mag

Newsgroup: rec.ham-radio
Date: 1988-09-23 19:27:41 UTC
From: rusty@cadnetix.COM
Message-ID: <4218@cadnetix.COM>
Source record: 19646
Cross-posted to: rec.ham-radio,sci.electronics

Well, I promised a report on that NiCd charger circuit from Ham Radio
mag, so here it is.

I had an 8-cell NiCd pack for my Kenwood TR2400 which had 2 or 3 bad
cells. 2 of the cells were dead shorts. After charging the pack
(1.5 C max pulse current then reduce to .1 C pulse current, in case you
wondered), the pack measured full charge. Being the curious type,
I checked each cell. Much to my surprise, two cells next to
each other were still dead shorts. So, I decided I had nothing
to lose other than whatever damage an exploded battery pack could
do, and charged up a large capacitor bank to 12 volts (using
the NiCd charger, not that it matters). When the cap bank reached
full charge, I blasted the 2 cells (only those 2 cells... I did
not want to blast 'good' cells). About 5 or 10 times. Then I
hooked up the charger to just those 2 cells, waited a while, and
LO!, they took a charge! Now, if they just hold it, I will be
ECSTATIC.

Your mileage may vary, but *I* am certainly a very satisfied user!

(A days work and about $3 in purchased parts, the rest junkbox, and
I saved a $60 battery pack. Prior attempts to zap the bad cells
had failed)

Rusty Carruth UUCP: {uunet,boulder}!cadnetix!rusty DOMAIN: rusty@cadnetix.com
Cadnetix Corp. (303) 444-8075x296 \ 5775 Flatiron Pkwy. \ Boulder, Co 80301
Radio: N7IKQ 'home': P.O.B. 461 \ Lafayette, CO 80026

258. Tiny oscilloscope tubes?

Newsgroup: rec.ham-radio
Date: 1988-09-26 04:57:05 UTC
From: haynes@ucscc.UCSC.EDU
Message-ID: <4935@saturn.ucsc.edu>
Source record: 19647
Cross-posted to: sci.electronics,rec.ham-radio

Used to have an old AM transmitter that used a one-inch oscilloscope
tube for a modulation monitor. Believe it was type 913, or maybe it
was 931. I would like to have something like this nowadays; wonder
if anybody knows whether such things still exist and where to get them.
haynes@ucscc.ucsc.edu
haynes@ucscc.bitnet
..ucbvax!ucscc!haynes

"Any clod can have the facts, but having opinions is an Art."
Charles McCabe, San Francisco Chronicle

259. Re: About to buy radio... actually about NiCds

Newsgroup: rec.ham-radio
Date: 1988-09-26 06:32:08 UTC
From: sjs@phobos.cis.ksu.edu
Message-ID: <122@deimos.cis.ksu.edu>
Source record: 19648
Cross-posted to: rec.ham-radio,sci.electronics

>I don't know if this is possible, but I am involved in the electronic
>scale business, and we were having battery problems, so we just pitched
>the factory batteries and started using gel cel batteries! These
>lasted about 10 times as long as the original batteries (I don't know
>if the originals were nicads or not), and they never stopped working.

Is it possible to use such gel cell batteries in a small package as a Handi-
Talkie? Could you also give a source for such batteries? Thanks.

- Steve Schallehn

260. Up-comming Ham Fests and Conventions

Newsgroup: rec.ham-radio
Date: 1988-09-26 13:41:37 UTC
From: ewb@raybed2.UUCP
Message-ID: <1226@raybed2.UUCP>
Source record: 19649
Cross-posted to: rec.ham-radio,rec.ham-radio.packet,sci.electronics

Just a quick reminder.... The New England Division Arrl Convention
will take place this weekend Oct 1 and 2 at the Sheraton Motel, Boxboro
Mass. Flea Market for sellers opens at 7:00 Am Sat.
Along with the usual tech talks and forums, there will be 3 Hidden TX
hunts, 2 sat and 1 sun, FCC exams (some walk-ins accepted), Woof Hong
ceremony (sat at Midnight), and many vendors with new equipment. There will
be many prizes given away Sunday at 2:00 P.M. Lots of other things happening
also.

ALSO SAT OCT 8 is the Fall edition of the Hoss Traders Flea
market. It will be at the KINGSTON Fair Grounds Kingston N.H. Doors open
at 4:00 pm Fri for campers and selling. The sat edition starts at DAWN !
C U there !!!.....73
WA1UXA

261. Byline Desk Top Publisher

Newsgroup: rec.ham-radio
Date: 1988-09-26 19:36:46 UTC
From: tjw@cisunx.UUCP
Message-ID: <12781@cisunx.UUCP>
Source record: 19650
Cross-posted to: comp.sys.ibm.pc,rec.ham-radio,rec.folk-dancing

Hello,

I'd like to get in touch with anyone who is using the Byline Desk Top Publishing software for IBM PCs or with anyone using PC Paintbrush and other "clip art" generators, who would like to exchange info and clip art.

I use Byline (distributed by Ashton Tate) with my Ham Radio club and my local folk music organization (and so the references to rec.ham-radio and rec.folk-dancing). I've been digitizing some Ham radio logos (ARRL diamond) and I've got some Folk Dancing clip art that is in the public domain, that works well with Byline.

If there's enough interest, I'd be willing to put together a distribution list or mailing list, etc. So please send me some E-mail if this is of interest to you. Please don't post as I don't regularly read news in some of these groups, but I read my mail every day.

Thanks (and 73)!

Terry (WA3VQJ)

--
(UUCP) {decwrl!allegra,bellcore,cadre,psuvax1}!pitt!cisunx!cisvms!tjw
(BITNET) TJW@PITTVMS
(Internet) tjw%vms.cis.pittsburgh.edu@vb.cc.cmu.edu
(CC-Net) CISVMS::TJW

262. Re: Tiny oscilloscope tubes?

Newsgroup: rec.ham-radio
Date: 1988-09-26 20:17:41 UTC
From: phd@speech1.cs.cmu.edu
Message-ID: <3105@pt.cs.cmu.edu>
Source record: 19651
Cross-posted to: sci.electronics,rec.ham-radio

In article <4935@saturn.ucsc.edu> haynes@ucscc.UCSC.EDU (Jim Haynes) writes:
>Used to have an old AM transmitter that used a one-inch oscilloscope
>tube for a modulation monitor. Believe it was type 913, or maybe it
>was 931. I would like to have something like this nowadays; wonder
>if anybody knows whether such things still exist and where to get them.

A couple of years ago, many of the electronic junk stores in the
San Fran. area were selling old Sony viewfinders. These are
1" monitors that take a standard video signal, and run off
a nine volt battery at about 100ma! Neat toy. Mine cost about $17.
The only catch is that the picture is inverted. Anyhow, I'm
sure it would be easy to use these for your purposes...

Paul H. Dietz ____ ____
Dept. of Electrical and Computer Engineering / oo \ <_<\\\
Carnegie Mellon University /| \/ |\ \\ \\
--- | | ( ) | | | ||\\
"If God had meant for penguins to fly, -->--<-- / / |\\\ /
he would have given them wings." _________^__^_________/ / / \\\\-

263. Re: About to buy radio... actually about NiCds

Newsgroup: rec.ham-radio
Date: 1988-09-27 05:12:22 UTC
From: gmg@hcx.uucp
Message-ID: <762@cseg.uucp>
Source record: 19652
Cross-posted to: rec.ham-radio,sci.electronics

In article <122@deimos.cis.ksu.edu>, sjs@phobos.cis.ksu.edu (Stephen J. Schallehn F88) writes:

[I wrote this part \/]
> >I don't know if this is possible, but I am involved in the electronic
> >scale business, and we were having battery problems, so we just pitched
> >the factory batteries and started using gel cel batteries! These
> >lasted about 10 times as long as the original batteries (I don't know
> >if the originals were nicads or not), and they never stopped working.
>
> Is it possible to use such gel cell batteries in a small package as a Handi-
> Talkie? Could you also give a source for such batteries? Thanks.
>
> - Steve Schallehn

The source for the batteries that we are using is Active electronics. They can be reached at 1-800-343-0874. The batteries they have range from 1.0 amp hour to 10.0 amp hour (rated for 20 hour discharge). Prices range from 16.19 to 57.99. They have both a 6 volt and 12 volt version. I am not sure if these would fit in a handi-talkie, but they would fit on your belt, as I have seen some hams do. I highly recommend these batteries. If you cannot find the radio-electronics article on the gel-cel charger, send me mail or call, and I will look up the exact date for the project.

Good luck!

Greg Garner
gmg@hcx.uucp
501-442-4847

264. Mods for Bearcat 210??

Newsgroup: rec.ham-radio
Date: 1988-10-03 15:32:23 UTC
From: savage@topaz.rutgers.edu
Message-ID: <Oct.3.11.32.21.1988.3708@topaz.rutgers.edu>
Source record: 19653
Cross-posted to: rec.ham-radio,sci.electronics

[----]

Does anyone know of any modifications you can perform on a Bearcat 210?
I've seen the mods posted for the Pro-2004 and hope there are similar
ones for the Bearcat 210. Also, I have the vanilla 210, not the latest
Bearcat 210 model. But, if you do have mods for anything similar to the
210 (such as the new 210 model, etc...), please tell me about these too.
Thanks...

--Ed

Arpa/Internet: savage@topaz.rutgers.edu
UUCP: ...!rutgers!topaz.rutgers.edu!savage

265. Re: Mods for Bearcat 190 (was: For 210)

Newsgroup: rec.ham-radio
Date: 1988-10-03 17:33:15 UTC
From: msmith@topaz.rutgers.edu
Message-ID: <Oct.3.13.33.13.1988.9940@topaz.rutgers.edu>
Source record: 19654
Cross-posted to: rec.ham-radio,sci.electronics

I've got an old Bearcat 190. Does anyone have mods for it?
Thanks.
Mark
--
Mark Smith (alias Smitty) "Be careful when looking into the distance,
RPO 1604; CN 5063 that you do not miss what is right under your nose."
New Brunswick, NJ 08903 {backbone}!rutgers!topaz.rutgers.edu!msmith
msmith@topaz.rutgers.edu Who cares in '88?

266. TNC's

Newsgroup: rec.ham-radio
Date: 1988-10-05 14:09:25 UTC
From: grossman@bbn.com
Message-ID: <30501@bbn.COM>
Source record: 19655
Cross-posted to: comp.sys.ibm.pc,rec.ham-radio,rec.ham-radio.packet

My brother (KA1PPG (Needham MA. without usenet access) wants to get into packet radio. I've let him borrow an old computer of mine (Trash-80) (TSR-80 Model I). It has a half decent comm programs thats been tested via a hookup with my IBM.

Does he need anything else besides a TNC?

The TNC we were looking at had connections on the back for the computer (RS232) and a DIN connector for the radio.

please email replies to grossman@bbn.com

267. Circular polarization vs omnidirectionality

Newsgroup: rec.ham-radio
Date: 1988-10-06 18:42:20 UTC
From: jbn@glacier.STANFORD.EDU
Message-ID: <17770@glacier.STANFORD.EDU>
Source record: 19656
Cross-posted to: rec.ham-radio,sci.electronics

Is it possible to construct a UHF antenna which is both circularly polarized and omnidirectional in the horizontal plane? Or are these requirements mutually exclusive? I'm looking for an antenna for 1.2GHz with these properties. Any ideas? I'm trying to reduce the effect of reflection nulls on my robot TV link.

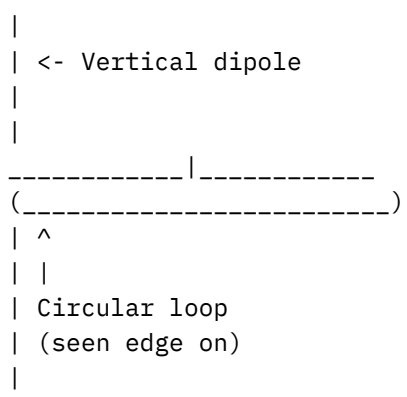
John Nagle
KA2XXF (part 5 experimental, not ham)

268. Re: Circular polarization vs omnidirectionality

Newsgroup: rec.ham-radio
Date: 1988-10-07 00:43:08 UTC
From: dleigh@hplabsz.HPL.HP.COM
Message-ID: <2419@hplabsz.HPL.HP.COM>
Source record: 19657
Cross-posted to: rec.ham-radio,sci.electronics

In article <17770@glacier.STANFORD.EDU> jbn@glacier.STANFORD.EDU (John B. Nagle) writes:
>
> Is it possible to construct a UHF antenna which is both circularly
>polarized and omnidirectional in the horizontal plane? Or are these
>requirements mutually exclusive? I'm looking for an antenna for 1.2GHz
>with these properties. Any ideas? I'm trying to reduce the effect of
>reflection nulls on my robot TV link.

I'm not an antenna expert, but I'll dig deep into my electrodynamics
and see what I can come up with. My guess would be to have a vertical
dipole and a circular loop like this:



For circular polarization, drive these so that the magnetic field from
the vertical is 90 degrees out of phase with the magnetic field of the
loop when it reaches the loop, and so that the magnetic field from the
loop is in phase with the magnetic field of the other side of the loop
when it gets there. In other words, make the radius of the loop an
even multiple of quarter wavelengths and drive the two parts 90
degrees out of phase.

This antenna should be omni-directional in the plane of the loop.
Directly above and below you're going to get nulls so this design will
be no good if your robot flies. ;-)

Real RF types please correct me if I'm wrong.

> John Nagle
> KA2XXF (part 5 experimental, not ham)

Sounds like a neat project, John. Good luck with it!

========
Darren Leigh -- (not part 5 experimental; not ham until I memorize
the code instead of the code tapes)

Internet: dleigh@hplabs.hp.com
UUCP: hplabs!dleigh

269. Re: Circular polarization vs omnidirectionality

Newsgroup: rec.ham-radio
Date: 1988-10-07 05:44:53 UTC
From: haynes@ucscc.UCSC.EDU
Message-ID: <5023@saturn.ucsc.edu>
Source record: 19658
Cross-posted to: rec.ham-radio,sci.electronics

I have an antenna on VHF that might have the properties you're looking for. It is from FAA surplus and is labeled circularly polarized, so I guess it is. It's rather hard to describe, but here goes.

The elements are swastika shaped. Imagine a swastika made out of solid metal. Now take the outer, hooked part of the swastika arms and bend them up from the open ends so they make an angle of about 30 deg. to the plane of the swastika. This is one "pole" of the antenna. The other is another swastika with the arms hooked in the opposite direction and bent down from the plane. The plane of the swastikas (inner arms) is horizontal. I don't know if there's anything (like a matching device) between the coax connector and the elements. The outer conductor of the coax is clearly connected directly to the lower swastika, but there may be something between the inner conductor and the upper swastika.

In case that description is totally confusing I'll try a different one.

Imagine two thick disks, horizontal, one above the other like an Oreo cookie. (Must be time for my bedtime snack.) Sticking out from the edges of the disks at four points 90 degrees apart are four parallel conductor transmission lines (made of about 3/4" diameter rods at VHF). At the end of each of these transmission lines is a dipole of the same diameter. The dipoles, rather than being horizontal are tilted (rotated) at about 30 degrees to the plane of the disks and transmission lines. So if you look horizontally at the antenna the near dipole is tilted one way and the far one is tilted the other way.

I assume the FAA wants this kind of antenna to receive equally well from airplanes in all directions; and circularly polarized so it doesn't care about the orientation of the (linearly polarized) antenna in the plane.

haynes@ucscc.ucsc.edu
haynes@ucscc.bitnet
..ucbvax!ucscc!haynes

"Any clod can have the facts, but having opinions is an Art."
Charles McCabe, San Francisco Chronicle

270. Re: Circular polarization vs omnidirectionality

Newsgroup: rec.ham-radio
Date: 1988-10-07 13:38:23 UTC
From: dya@unccvax.UUCP
Message-ID: <1157@unccvax.UUCP>
Source record: 19659
Cross-posted to: rec.ham-radio,sci.electronics

In article <17770@glacier.STANFORD.EDU>, jbn@glacier.STANFORD.EDU (John B. Nagle) writes:

> Is it possible to construct a UHF antenna which is both circularly
> polarized and omnidirectional in the horizontal plane? Or are these
> requirements mutually exclusive? I'm looking for an antenna for 1.2GHz

The requirements are not mutually exclusive, as many TV stations,
even UHF, utilise circular polarisation. Scala Electronics (Medford,
Oregon), Bogner (Long Island) and Dielectric Systems (?) manufacture
these antennas, but they are quite large and very expensive.

If you don't care about efficiency (much) try a normal mode
helical antenna. This is one where would orient the helix normal
to the floor, and obtain the dreaded sin(theta) radiation characteristic
for both electrical modes. They are very easy to construct and you
should be able to get an axial ratio in the .8 to 1.2 range very
easily (in which you'll have elliptical polarisation).

Computing the helix dimensions will be easy, but determining
the operating impedance will be more difficult. Any good antenna
text should have this information; you'll be able to get up and
running with this probably in one day or so.

York David Anthony
DataSpan, Inc

271. Re: Circular polarization vs omnidirectionality

Newsgroup: rec.ham-radio
Date: 1988-10-07 17:31:23 UTC
From: wjc@XN.LL.MIT.EDU
Message-ID: <1122@xn.LL.MIT.EDU>
Source record: 19660
Cross-posted to: rec.ham-radio,sci.electronics

The ARRL Satellite Experimenter's Handbook shows some omni-az/circular-pol antenna designs. The most interesting is the quadrifliar helix, which is fashioned from wire in the form of four intermingled helices. It has been used on amateur satellites and with GPS receivers. Its radiation pattern does, however, favor the long axis of the antenna. Also, it is supposedly quite sensitive to its environment.

Perhaps a more workable design is the Lindenblad antenna, which comprises a number of dipoles (at least four) spaced around the periphery of an imaginary, horizontal circle. The dipoles are tilted about 30 degrees out of the horizontal plane. I believe the "swastika" antenna mentioned earlier is of this design. Also, I remember once seeing such an array spaced around an observation deck on the Empire State Building -- I think it was for FM radio broadcasting. The Lindenblad concentrates its radiation at low angles; it's truly omniazimuthal.

There is also the turnstile (crossed dipoles over a ground plane), but its circularity is not good at low angles.

Some references from the Satellite Experimenter's Handbook are:

Lindenblad:
Brown & Woodward: "Circularly-Polarized Omnidirectional Antenna," RCA Review, Vol. 8, June 1947, pp. 259-269

Quadrifilar heilx:
Kilgus, "Resonant Quadrifilar Heilx Design," Microwave Journal, Dec. 1970, pp. 49-54

Have fun,
Bill
N1CPK

272. Re: Circular polarization vs omnidirectionality

Newsgroup: rec.ham-radio
Date: 1988-10-07 19:15:09 UTC
From: dleigh@hplabsz.HPL.HP.COM
Message-ID: <2427@hplabsz.HPL.HP.COM>
Source record: 19661
Cross-posted to: rec.ham-radio,sci.electronics

In article <2419@hplabsz.HPL.HP.COM> dleigh@hplabsz.UUCP (Darren Leigh) writes:
>In article <17770@glacier.STANFORD.EDU> jbn@glacier.STANFORD.EDU (John B. Nagle) writes:

[John wanted an omni-directional, circularly polarized antenna.
I offered the following design but got it wrong: see below]

```
|
|
| |
| | <- Vertical dipole
| |
| |
| ____________|____________
| (_________________________)
| | ^
| | |
| | Circular loop
| | (seen edge on)
| |
|
|
```

|For circular polarization, drive these so that the magnetic field from
|the vertical is 90 degrees out of phase with the magnetic field of the
|loop when it reaches the loop, and so that the magnetic field from the
|loop is in phase with the magnetic field of the other side of the loop
|when it gets there. In other words, make the radius of the loop an
|even multiple of quarter wavelengths and drive the two parts 90
|degrees out of phase.

I forgot that the current on the far side of the loop is going the
opposite direction as that on the near side; therefore the diameter
should be an odd multiple of half wavelengths. To do this antenna
right then, the radius of the loop should be an odd multiple of
quarter wavelengths and the two elements should be driven in phase.

========
Darren Leigh
Internet: dleigh@hplabs.hp.com
UUCP: hplabs!dleigh

273. Re: Circular polarization vs omnidirectionality

Newsgroup: rec.ham-radio
Date: 1988-10-07 22:12:58 UTC
From: leadfoot%leftlane@Sun.COM
Message-ID: <72094@sun.uucp>
Source record: 19662
Cross-posted to: rec.ham-radio,sci.electronics

In article <1122@xn.LL.MIT.EDU> wjc@XN.LL.MIT.EDU (Bill Chiarchiaro) writes:
>
> Also, I
>remember once seeing such an array spaced around an observation deck
>on the Empire State Building -- I think it was for FM radio
>broadcasting. The Lindenblad concentrates its radiation at low
>angles; it's truly omniazimuthal.
>
>Have fun,
>Bill
>N1CPK

I saw that antenna last year sometime at a distance of about 4 feet. I
wonder what the field strength was where I was standing?

274. Re: Circular polarization vs omnidirectionality

Newsgroup: rec.ham-radio
Date: 1988-10-07 22:33:44 UTC
From: prager@Data-IO.COM
Message-ID: <1707@dataio.Data-IO.COM>
Source record: 19663
Cross-posted to: rec.ham-radio,sci.electronics

First a question. Is there a difference between a circularly polarized antenna and an antenna whose radiated enerty has equal vertical and horizontal components?

If not, I'd suggest that anyone looking for an antenna with these characteristics check into broadcast antennas for the commercial FM band. These antennas are well designed (usually), omnidirectional, and have equal H and V components. The major manufacturers maintain test ranges and do considerable research on their equipment.

While omnidirectional, effective gain is achieved through phased stacking of the radiating elements. Arrays of antennas can them be center or end fed depending on preference and mounting set up.

There is a company called Shively Labortory in Maine who publishes a wonderful catalog. The designs and specs for most of their line is publicly availible.

I don't think that many hams need antennas that are built this beefy, but the design issues have already been worked out.

David
once upon WA3KQN

David Prager (w)206-881-6444 (h)206-485-4397
Data I/O Corp
10524 Willows Rd. NE prager@DATA-IO.COM
Redmond, WA. ...uw-beaver!entropy!dataio!prager
98073-9746 or whatever works.

275. full coverage scanner info

Newsgroup: rec.ham-radio
Date: 1988-10-09 02:15:28 UTC
From: NU040889@NDSUVM1.BITNET
Message-ID: <1441NU040889@NDSUVM1>
Source record: 19664
Cross-posted to: sci.electronics,rec.ham-radio

In response to my request for advice in buying a scanner, I received some
very interesting information from Markus Mueller. His letter follows:

>I would recommend you to buy either an AOR AR-2002 (covers 25 - 550 and
>800 - 1300 MHz in AM, FM and FM-wide) or to wait a few more month and then
>buy an AOR AR-3000 (100kHz - 2000MHz AM/FM/FM-wide/SSB). These scanners
>are not cheap (around $ 700 in Switzerland for the 2002; no price yet for
>3000), but they are both *very* sensitive and resistent against large
>signals on nearby bands.
>
>If you cannot get this make within US, or if you do need to have the full
>specified frequency range including Cellular (Warning! ECPA!), write or
>call
>
> Poly-Elektronik
> CH-8303 Bassersdorf
> Switzerland
> Phone from US: 011 411 836 82 37
>
>for a quote.
>
> Markus Mueller
> Institut fuer Informatik
> Swiss Federal Institute of Technology
> Zurich
> Switzerland
>
>~ UUCP/Usenet : {known world}!uunet!mcvax!cernvax!ethz!muellerma
>~ CSNET : muellerma%ifi.ethz.ch@relay.cs.net
>~ ARPA : muellerma%ifi.ethz.ch@csnet-relay.arpa
>
>Disclaimer: All of above represents my personal point of view and not that one
>of my employer.

Further correspondence with Markus yielded this:

> I also called Poly
>Electronic this afternoon, and yes they do deliver to US.
>
>However I forgot to mention a few more details about AR-2002:
>a) It has very few birdies; much less than an ordinary scanner. However one
> of the few bad birdies ist at 144.980 MHz, therefore in the middle of the
> 2 m ham bands.
>b) Scanning and searching is slow with only 5 channels / sec. However

> the search step can be varied between 5, 12.5 and 25 kHz so the
> search gets quite fast on UHF.
>c) It has a serial port for computer control; however it is not RS232
> and a level converter (available as an option) is required for true
> RS232 operation. Various additional signals like signal strength and
> squelch are also available on the computer socket at the back.
>d) It has a LED-bar type S-Meter.
>
> Markus Mueller

-Todd
--
Todd Michael Bezenek, KO0N
Bitnet: nebezene@ndsuvax
NU040889@ndsuvm1
UUCP: nebezene@plains.nodak.edu

#! rnews 544
Relay-Version: Version 1.7 PSU-NETNEWS 5/20/88; site PSUVM.BITNET
Posting-Version: Ver

276. Wanted: Satellite orbital prediction program

Newsgroup: rec.ham-radio
Date: 1988-10-11 02:39:04 UTC
From: frohne@pur-ee.UUCP
Message-ID: <9446@pur-ee.UUCP>
Source record: 19665
Cross-posted to: rec.ham-radio,comp.binaries.ibm.pc.d

Does anybody out there have a satellite orbital prediction program (hopefully written in C)? If you have a PD copy, could you please send me a copy or post a copy? I'm wanting to get back into the satellite ham radio hobby. Thanks in advance.

Rob Frohne
pur-ee!frohne

277. |||()||| WANTED: Short wave radio recomm/used

Newsgroup: rec.ham-radio
Date: 1988-10-11 15:38:23 UTC
From: ssa@mrsvr.UUCP
Message-ID: <474@mrsvr.UUCP>
Source record: 19666
Cross-posted to: sci.electronics,rec.audio,misc.forsale,misc.wanted,wi.forsale,rec.ham-radio

I am looking for recommendations on buying a Short wave
radio. I would also be interested in buying a used one...

Thanks,

```
==========================================================================

/ /| | |\ \ | |
/__ /_| | |_\ \ | | ...att!uwmcsd1!mrsvr!ssa
/ / | | | \ \ | | (414) 547-9429
/ o / | |__ | \ \| | (414) 521-6607 (work)

==========================================================================
```

278. Re: Comm Traffic (was Re: "Houston, ... BFS")

Newsgroup: rec.ham-radio
Date: 1988-10-12 18:55:59 UTC
From: knudsen@ihlpl.ATT.COM
Message-ID: <7167@ihlpl.ATT.COM>
Source record: 19667
Cross-posted to: sci.space.shuttle,rec.ham-radio

In article <6514@pyr.gatech.EDU>, edp@pyr.gatech.EDU (Warren Tucker) writes:
> Network TV coverage should, like other children, be seen and not
> heard. (If you have Select access, you don't even have to see
> the junk). Next time, find a short wave receiver and listen to
> the shuttle on HF radio. I found it pleasing to turn the sound
> OFF and watch the launch/landing while listening to the real
> thing at 14.295 MHz, compliments of the Goddard Amateur Radio Club!

Thanks to postings in these Nets, I had the 20-meter Goddard ARC
coverage going on my Sony 2001 the whole time.
Unfortunately, I forgot to do the obvious thing the nite before:
rig a patch cord to my VCR from the radio. That way I could have
had the a**holes of ABC commentary on one channel (my VCR is stereo)
and the real cap-com on the other. Now when I replay the tape
I have just the ABC news jabber. Would love to know what
the astronauts said when the SRBs separated, etc.
Next time I'll do this right.

BTW, other ham operators could have done a little better job
of staying clear of the frequency. Other than that I was real pleased
with Maryland's signal here in 9-land.

279. Re: Comm Traffic (was Re: "Houston, ... BFS")

Newsgroup: rec.ham-radio
Date: 1988-10-13 05:38:31 UTC
From: chguest@pioneer.arc.nasa.gov.arpa
Message-ID: <16457@ames.arc.nasa.gov>
Source record: 19668
Cross-posted to: sci.space.shuttle,rec.ham-radio

In article <7167@ihlpl.ATT.COM> knudsen@ihlpl.ATT.COM (Knudsen) writes:
>In article <6514@pyr.gatech.EDU>, edp@pyr.gatech.EDU (Warren Tucker) writes:
>> Network TV coverage should, like other children, be seen and not
>> heard. (If you have Select access, you don't even have to see
>> the junk). Next time, find a short wave receiver and listen to
>> the shuttle on HF radio.

>Thanks to postings in these Nets, I had the 20-meter Goddard ARC
>coverage going on my Sony 2001 the whole time.
>
>BTW, other ham operators could have done a little better job
>of staying clear of the frequency. Other than that I was real pleased
>with Maryland's signal here in 9-land.

I think we all owe a big THANK YOU to the operators who brought us NASA
select coverage via NASA amature radio clubs. In my area it was a Mr.
Edgerton who put in many long hours in the NASA retransmitting shack. I
feel that I got much more out of being allowed to listen to the un-ABC
CBS NBCed version of the launch and landing. I believe that everyone
who heard these transmissions should respond by letting the local
rebroadcaster know that he was appreciated. If he was a member of a
NASA amature radio club there is a good chance that he did it all on his
own time. Persons who were happy with the service should also consider
writing the NASA public affairs group to let them know that it was
appreciated.....perhapps even suggest a NASA Select TV broadcast on an
unused TV channel in the area.

feeling better CJG climbed down off of his soap box.......

****
* OVERAL AND ALL INCLUSIVE DISCLAIMER: *
* (except for what I left out and meant to say) *
* The above reply/article is my opinion **only* *
* True and articulable facts had no bearing on *
* the above statements. 8=) :-) :-> *
****

280. scanner reviews and comments wanted

Newsgroup: rec.ham-radio
Date: 1988-10-14 01:29:39 UTC
From: chan@ames.arc.nasa.gov
Message-ID: <1723@eos.UUCP>
Source record: 19669
Cross-posted to: sci.electronics,rec.ham-radio

I know that Todd (nebenzene@plains.nodak.edu) has already asked
for comments on scanners in general, but I'd like to know if anyone
has COMMENTS or knows of ANY REVIEWS of the Bearcat 760 or the
ACE/AOR AR2002. I'm really more interested in the 760 since I'm
on the brink (within the next few days) of getting one. One of my
bosses will probably get himself the AOR in January, so perhaps
we'll try to do a comparison review later.

Briefly, the 760 has the size and layout of a car stereo, gets
VHF lo, hi, aircraft, UHF and the 800 band and costs $245 from
Communication Electronics (1-800-USA-SCAN). The AOR usually
sells for mid-$400, offers continuous coverage from 25-550 and
800-1300 and is in a larger, but still mobile package. The AOR
is imported from Japan (where else >:-()) by ACE communications
and I've seen it advertized for $43X from Mil Spec Communications
in a recent Monitoring Times. According to their ad, the AR2002
is "the only compact with military UHF and cellular."

The 760 has a much faster scan rate and has "service scan" which
I presume is an Informant-like preprogramming of public service
channels. The AOR sounds like a slightly more sophisticated receiver
design, but I like the features and convenience of the 760 better
(never thought I'd hear myself make a statement like that). The
size and configuration are more important to me than the coverage
(the 760 is already all I need), and I like the price. I plan to
use the scanner on my desk and in my car.

Please e-mail replies; I will forward to Todd or post.

Thanks in advance,

Jeff C.
Internet: chan@ames.arc.nasa.gov
UUCP: ames!chan

P. S. I have no connections with any of the business above; The opinions
are mine alone. (That's the best price I could find; hope it helps.)

281. LORAN TI9900

Newsgroup: rec.ham-radio
Date: 1988-10-14 20:44:51 UTC
From: charlie@oakhill.UUCP
Message-ID: <1572@radio.oakhill.UUCP>
Source record: 19670
Cross-posted to: sci.electronics,rec.ham-radio

I am looking for schematics for the TI model 9900 LORAN receiver. I have one that is no workie. Any clues as to where I can get schematics would be greatly appreciated. (TI wants $75 for schematics ...!@#$%^&!!)

Charlie Thompson
WB4HVD

282. Re: Weather data by 1200 baud modem? FAX WEFAX

Newsgroup: rec.ham-radio
Date: 1988-10-14 23:00:47 UTC
From: tedk@ihuxv.ATT.COM
Message-ID: <2923@ihuxv.ATT.COM>
Source record: 19671
Cross-posted to: comp.misc,rec.aviation,rec.ham-radio

In article <1227@ndmath.UUCP> milo@ndmath.UUCP (Greg Corson) writes:
>Does anyone happen to know of a service where you can get weather data
>such as satelite pictures, weather maps...etc over the phone with a
>standard 300/1200/2400 baud modem?

This type of thing can be had for free, from the air waves. Ham radio
operators have been sending/receiving pictures for decades.

What you refer to is called WEFAX, short for Weather Facsimile.

You will need to invest in some "off-the-shelf" hardware.
* Radio Receiver - Short-wave, HF, or VHF bands.
* FACSIMILE decoder - Several to be had, The best is model PK-232
or Heathkit HK-232.

1) The Navy and other government offices transmit weather maps
and satellite pictures on the short wave bands. These operations
are called "utility stations". Most HAM readio magazines
have a section devoted to this type of stuff.

2) Satellite images can be received directly from the satellites. Again
most HAM magazines talk about this hobby activity.

There is alot more digital stuff to be had for free. There is all kinds
of data transmitted on the airwaves such
as UPI and AP radio-photos (wire-photo), News information services and
much, much more. This is called RTTY. (Radio TeleTYPE)

Ted G. Kekatos
UUCP: ..!att!ihuxv!tedk (312) 979-0804
AT&T Bell Laboratories, Indian Hill South, IX-1F-460
Naperville & Wheaton Roads - Naperville, Illinois. 60566 USA

283. Re: scanner reviews and comments wanted [760XLT articles]

Newsgroup: rec.ham-radio
Date: 1988-10-15 02:34:49 UTC
From: parnass@ihuxz.ATT.COM
Message-ID: <3498@ihuxz.ATT.COM>
Source record: 19672
Cross-posted to: sci.electronics,rec.ham-radio

Enclosed are articles pertaining to the Uniden/Bearcat 760xlt scanner.
I tried to send these to the original requestor via e-mail but
my mail was rejected.
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Bob Parnass AJ9S, AT&T Bell Laboratories - att!ihuxz!parnass - (312)979-5414

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- 1 -

UNIDEN/BEARCAT 760XLT SCANNER:
FIRST IMPRESSIONS

by Bob Parnass, AJ9S

Reviews of the new Uniden/Bearcat 760XLT (950XLT) scanner
have been published in Monitoring Times and the All Ohio
Scanner Club's American Scannergram. I've been using my
760XLT for several days now, and here are my observa-
tions.

The 760XLT, also sold as the 950XLT, is a full featured
base/mobile scanner, which makes use of surface mount
technology to cram 100 channels into a small, metal
cabinet. Generous coverage is given to the traditional
scanner bands, including aircraft, 10 meter FM, 6 meters,
and the 800 MHz ranges. A 10.85 MHz first intermediate
frequency (IF) is used, versus the 10.8 MHz IF in the
older Bearcat 300.

Although Uniden sales literature claims the cellular
telephone bands are excluded, my 760XLT came equipped
with this coverage. Some scanner dealers, like Grove
Enterprises, charge about $10 for the scanners they
upgrade with a simple modification to restore cellular
phone coverage. Grove no longer offers the cellular res-
toration modification. I didn't buy the $35 wideband
preamplifier or $69 CTCSS decoder options.

When using the 760XLT with an outside antenna, I
experienced intermodulation distortion from paging
transmitters, as was true with the 40 channel 800XLT. In
both cases, the front end circuitry is probably being
overloaded (driven into the non-linear region) by the
strong paging signals.

All is not lost, however. I bought this radio to monitor local signals, and no intermodulation products were heard when using the 760XLT connected to an indoor antenna. In this respect, the 760XLT fares better than the 800XLT, which sometimes experiences paging interference using only its internal whip antenna.

The 760XLT does receive images 21.7 MHz (twice the IF) below the programmed frequency. One can hear pilots, actually transmitting in the 118-132 MHz range, while scanning the 140-174 MHz band. Images are nothing new. Experience shows that scanners employing up conversion, with high IFs, are less likely to suffer image problems. Spend the extra money and buy a Radio Shack PRO-2004 or ICOM R7000 if you want to search the 160-170 range

without image interference.

I have a difficult time monitoring Naperville Police on 470.3125 MHz using my 760XLT on an indoor antenna. No, it's not a sensitivity problem, the problem is that the 760XLT hears TV channel 35 audio (601.75 MHz) on 470.300 MHz, and the wider IF filter allows the religious TV broadcasting signals to interfere with adjacent channels.

My calculations confirm that the 760XLT can hear 601.75 MHz TV on 470.3 MHz due to the phenomenon of multiple injection frequencies.1 When the scanner is programmed to 470.3 MHz, its synthesizer is generating a signal on 153.15 MHz. The third harmonic of 153.15 MHz is mixed with the incoming signal to produce an IF of 10.85 MHz.

The TV problem arises because the 4th harmonic of 153.15 MHz is also present, and it mixes with the 601.75 MHz TV signal to produce 10.85 MHz.2

Sensitivity on 800 MHz and other bands appears adequate. I can still hear Joliet Police, DuPage County Sheriff, and Naperville Fire on 800 MHz using a 19 inch whip antenna in rural Oswego.

The 760XLT and 800XLT squelch controls are sloppy, having too much hysteresis. I can usually fix this by changing a single resistor, but the surface mount construction, and lack of a schematic make modification more difficult in the 760XLT.

Now for a scanner history lesson. Electra's Bearcat 300 scanner was introduced in the 1979-80 timeframe, and became a favorite of scanner enthusiasts. The 300 included a new "Service Search" feature, whereby several FCC allocated frequencies were preprogrammed by the factory.

Users could press one of 11 keys (for Police, Fire, Hams,

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1. See "512-657 MHz Reception on Your Scanner," by Bob Parnass, AJ9S, in Monitoring Times, February 1985, pg 19.

2. The multiple injection frequency problem plagues other scanners, like the Radio Shack PRO-30, which can hear 800 MHz signals in the 390 MHz range, and Bearcat 20/20, which can hear 162.55 MHz weather broadcasts in the 30-50 MHz range.

Mobile Telephone, Aircraft, Marine, etc.) and the scanner would scan all the preprogrammed frequencies for the specified service.3 This was especially handy when the scanner went along on vacation, making it easier to find the local channels for police and fire.

Bearcat's main competitor, Regency Electronics, offered their version of a Service Search feature in the K500, M400, and D810 models.

Although the Bearcat 300 has been discontinued, the new 760XLT carries forward the Service Search tradition. The 760XLT Service Search covers only Police, Fire/Emergency, Aircraft, Marine, and Weather. Service Search banks for Ham, Industrial, Local Government, Forestry, Transportation, and Telephone have been dropped, although any these frequencies can be programmed in the usual manner. A new feature is "buried" in 760XLT owners' manual, and is not mentioned in the advertisements. The 760XLT provides the ability to lock out preprogrammed frequencies, one by one, from the Police and Fire/Emergency services.

Say you don't want to listen to the hospital paging on 152.0075 MHz (rounded to 152.010), now you can lock it out of the Fire/Emergency search. Locked out channels in a given bank can be re-enabled en-masse by depressing the LOCKOUT key down for 2.5 seconds.

I was looking for a scanner operable in the dark, and the 760XLT fit the bill. The orange LCD display is backlit at all times, as are the hard plastic SCAN, MANUAL, PRIORITY, and HOLD keys. The four keys must be lit by incandescent bulbs, as they get warm to the touch. Since the solid rubber frequency keys are not lit, one can operate, but not program the 760XLT in the dark.

When Uniden acquired the Bearcat line of scanners from Electra, they greatly improved the internal construction, but started using wider IF filters. The Uniden scanners are less selective than their predecessors, which means they are more prone to adjacent channel interference. I would have gladly paid the extra $3 or so for a better filter.

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3. The recently enacted Electronic Communication Privacy Act (ECPA) makes it illegal to monitor mobile telephone calls.

- 4 -

So far, I like the 760XLT. I paid about $290 for the 760XLT from Grove Enterprises, Brasstown, NC - good folks who use what they sell.

MORE COMMENTS ON THE 760XLT

by David Woo4

I purchased the Uniden 760XLT [scanner] recently based on your review.5

I got it sans CMT (cellular mobile telephone) coverage. It was very difficult to implement the Monitoring Times conversion for cellular phone. I had to take both covers off to get pin 20 out of the board. I was unable to cut the pin from the bottom side with any available tool, so I ended up unsoldering the pin and yanking it up from the board from the bottom side.

Once I soldered pin 19 to 20, CMT coverage did function as advertised.

The 760XLT definitely has a good deal more spurs than the PRO-2004. Also, the lack of the sound squelch means you can't scan through IMTS mobile telephones, which place a carrier on unused channels.

Your comments on the mushy squelch are VERY true. If you come up with a modification like for the PRO-2004 squelch, scannerdom will certainly appreciate it.

It is possible to use the frequency up and down keys of the PRO-2004 at night. If you look at the back of the keypad, there is a shield with a hole in the middle of it. Last year, Radio ShackO sold a 12V bulb (60 mA?) with pigtail leads. Unfortunately, they no longer have it. I put this bulb in a grommet and glued it in the hole. I grounded one lead and connected the hot lead to

---

4. David Woo, room IH 4G-319, AT&T Bell Laboratories, Naperville, IL

5. See "Uniden/Bearcat 760XLT Scanner: First Impressions," by Bob Parnass, AJ9S, in The Radio Enthusiast, June, 1988.

the switch on back of the volume control. Enough light comes through the yellow keys so that the up/down frequency keys can be found in the dark.

I didn't do the 400 channel conversion, so I don't know if enough light would come through the commercially available keypad overlay that was sold in Monitoring Times.

AVOID TROUBLE WITH THE
760XLT ANTENNA CONNECTOR

by Bob Parnass, AJ9S

The Uniden/Bearcat 760XLT rear panel is outfitted with a Motorola-type auto radio jack. Around the outside of the jack is a plastic lip. This arrangement works well with the supplied telescoping antenna, but can cause trouble if the scanner is used with an SO-239 adaptor, like the Radio ShackO #278-208.

The 760XLT's plastic lip prevents one from inserting the adaptor far enough for the center pin to make reliable contact. This will result in a serious loss of sensitivity.

The solution is simple. Using a flat file, carefully file the plastic lip down uniformly by about 1/16 - 1/8 inch. Don't spill the filings into the radio.

Now the adaptor can be inserted farther into the antenna jack.

PROBLEMS WITH UNIDEN REPAIR SERVICE

by Bob Parnass, AJ9S

As I wrote in a previous article, I usually fix my own scanners. However, when a new radio fails, it's incumbent on the manufacturer to make good on the warranty.6

My experience with Uniden's Customer Service department may represent how they treat other customers. If so,

then Uniden's purchase of Regency and Bearcat scanners is a setback for consumers.

o June 12: I bought a brand new Uniden 760XLT scanner. On getting the scanner home, it was clear this radio had memory problems.

o June 14: After speaking with Chris at Uniden Customer Service, I sent my new scanner to Uniden to fix under warranty, and was quoted a 15-20 day turnaround time.

o August 29: Over two months and several telephone calls later, I received a replacement scanner that was also defective.

o September 1: Spoke with Judy at Uniden who asked me to send back the scanner and promised to ship me a new one immediately on receiving mine. I sent the radio back the next day.

o September 16: Receive confirmation from Uniden that they got my scanner, but they won't ship another one until October 6!

If answering customer phone calls is any measure of service, then Uniden has a long way to go. When the Customer Service telephone is not busy, I have counted up to 18 - 26 rings before it's answered or I give up.

To be fair, the representatives were usually courteous. But they were quick to promise, and I learned not to believe what they said. Nobody there seemed willing to "own the problem."

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6. See "Confessions of a Scanner Collector," by Bob Parnass, in Monitoring Times, August 1988.

Twice, in vain, I asked to speak to a supervisor. Representatives Chris and Judy took my name and phone number, but my calls were never returned. Neither would representatives refer me to anyone outside the Customer Service department.

This poor treatment makes me hesitate to recommend Uniden service when scanner owners seek my advice.

To make smaller scanners, manufacturers are now using tiny surface mount components in their new generation models, including Uniden's 600/760XLT and 100/200XLT

series. This makes it near impossible for even good
repair shops to fix them.

The bad news for scanner owners is that they now have
fewer options for repair service. The bad news for
Uniden is that Radio ShackO and AOR also sell scanners.

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Bob Parnass AJ9S, AT&T Bell Laboratories - att!ihuxz!parnass - (312)979-5414

284. Re: LORAN TI9900

Newsgroup: rec.ham-radio
Date: 1988-10-15 14:08:37 UTC
From: john@anasaz.UUCP
Message-ID: <1391@anasaz.UUCP>
Source record: 19676
Cross-posted to: sci.electronics,rec.ham-radio

In article <1572@radio.oakhill.UUCP> charlie@oakhill.UUCP (Charlie Thompson) writes:
]I am looking for schematics for the TI model 9900 LORAN receiver. I have
]one that is no workie. Any clues as to where I can get schematics would
]be greatly appreciated. (TI wants $75 for schematics ...!@#$%^&!!)

(1) You might try Sam's photofacts (I don't know if they have Lorans,
but it doesn't hurt to try)
(2) TI filed a patent around 1979-1980 that gives detailed schematics
of a LORAN receiver. It might be the one you have. You could check
a patent library for it.

--
John Moore (NJ7E) {decvax, ncar, ihnp4}!noao!nud!anasaz!john
(602) 861-7607 (day or eve) {gatech, ames, rutgers}!ncar!...
The opinions expressed here are obviously not mine, so they must be
someone else's. :-)

285. Scanners/Receivers from AOR (address & ph#)

Newsgroup: rec.ham-radio
Date: 1988-10-15 22:39:30 UTC
From: cyamamot@castor.usc.edu
Message-ID: <1651@nunki.usc.edu>
Source record: 19673
Cross-posted to: sci.electronics,rec.ham-radio

Greetings,
In search of selecting the most full featured and widest-coverage receiver/scanner, I have narrowed down my choices. One of them, however, is the AOR AR-3000 which according to ACE Communications in Indpls. is still only available in Japan, and won't be here till the middle of next year.

Does anyone own an AOR scanner (or simply know) what the address and ph# of AOR is in Japan? I'd like to find out exactly what the AR-3000 offers and if they'd be willing to ship to the U.S. There's nothing wrong with the Icom R-7000 (my other choice), but I don't want to run out and buy one if the AR-3000 equals/surpasses it in features/performance. I know the AOR is 100kHz to 2 Ghz, but if it doesn't cut it, I'd rather buy a R-7000 AND a R-71A combo to get the coverage (yes, I have neither a HF receiver or a decent VHF/UHF scanner, hence my two choices).

As an afterthought, does anyone disagree with my choices? Would it the Kenwood that covers 60-960 Mhz be better? Would the JIL with all its add on boxes/converters be better?

Cliff Yamamoto - KA6JRG
Jet Propulsion Labs
4800 Oak Grove Drive
Pasadena, Calif. 91109
(818) 354-1616

286. Re: scanner reviews and comments wanted [760XLT articles]

Newsgroup: rec.ham-radio
Date: 1988-10-17 00:26:45 UTC
From: chan@ames.arc.nasa.gov
Message-ID: <1745@eos.UUCP>
Source record: 19674
Cross-posted to: sci.electronics,rec.ham-radio

Many thanks to Bob Parnass and the others who answered my query on CTCSS. I'm grateful for your comments.

I've just ordered a Bearcat 760XTL scanner from Communication Electronics in Michigan (1-800-USA-SCAN) for $245. I hope that I'm getting first quality at this price. I hope to post a review, perhaps in comparison with the AOR AR2002 my boss plans to get at the end of the year.

[By the way, Uniden's service on an RD-9 radar detector (bar graph display went bad) was courteous *and* prompt. I had about a three week turnaround from California. (They fixed the display and tweaked the sensitivity too.) Also, Surface Mount Devices are popping up all over the place now and are a fact of life. Better to learn how to work with them than to curse their existance. They do have very short leads {just about none}, can be of tight quality, and help bring down size and cost. I first saw them on my Philips-made Magnavox 560 CD player about two years ago. (Actually all the micro- redar detectors use them also.)]

Accordingly, I very interested in the various mods (400 channel, keyboard overlay, cellular restoration, etc) that can be done on the 760. Because of this, I have started a subscription to Monitoring Times and I'm looking forward to upcoming issues. But starting a subscription now obviously won't get me any of the earlier articles. Pointers to them or any information on mods would be greatly appreciated.

Thanks again,

Jeff C.
Internet: chan@ames.arc.nasa.gov
UUCP: ames!chan

P. S. Bob: I'm not sure why your mailer had problems, ames is a major uucp and internet node. Perhaps it is the fact that I posted from a different account. I look forward to your net and paper articles. (I thought I'd seen your name somewhere!)

287. Re: LORAN TI9900

Newsgroup: rec.ham-radio
Date: 1988-10-17 13:15:44 UTC
From: jim@mnetor.UUCP
Message-ID: <4748@mnetor.UUCP>
Source record: 19675
Cross-posted to: sci.electronics,rec.ham-radio

In article <1572@radio.oakhill.UUCP> charlie@oakhill.UUCP (Charlie Thompson) writes:
>I am looking for schematics for the TI model 9900 LORAN receiver. I have
>one that is no workie. Any clues as to where I can get schematics would
>be greatly appreciated.

I wonder if somebody could give a basic theory of operation for LORAN C.
I have read the basic theory presented in a user's manual of a friend,
but they don't get too technical.

From what I understand, around the world there are certain 'chains'
of 5 stations each. For a given chain, one's location is determined
from the timing of a pulse from the master and the best two of 4 slave
stations. All stations around the world operate on the same frequency
100 kHz ??

Some of the things that I don't understand:

- the manual says a given 'chain' is determined by its repetition
rate, but how is this actually done? Like how does the timing
of the various chains fit in time with respect to each other?
How is the information for a given chain recovered, how is the
recovery actually implemented? Something like a slow-speed
software PLL??

- how is the 100 kHz selected out of all of the RF crud in the
world? It can't be filtered with an IF like regular signals,
because the manual mentions something about the master producing
5 cycles of the 100 kHz, and the receiver locks onto the third
for accuracy, but the user can soft-select a different cycle for
various reasons (the 5 cycles, etc could be wrong, this is from
memory).

- the manual mentions something about having a backup master
station, if the first one can't be read reliably, how does
this work??

tnx, jim
--
Jim Stewart, VE3SRJ
UUCP: {decvax|allegra|ihnp4|linus|utcsri}!utzoo!mnetor!jim
ARPA: mnetor!jim@seismo.css.gov
BELL: (416)475-8980 x303

288. TVRO and Radio-Astronomy?

Newsgroup: rec.ham-radio
Date: 1988-10-21 18:09:31 UTC
From: miller@pur-ee.UUCP
Message-ID: <9569@pur-ee.UUCP>
Source record: 19577
Cross-posted to: sci.astro,rec.ham-radio,sci.electronics

A friend posed a question I can't answer, so I will ask the net: Given a generic home-type satellite TV dish antenna system (3.7-4.2Ghz) on an EQUATORIAL mount, what modifications would have to me made to perform simple radio-astronomy experiments?? Are there even any frequencies of interest to R-A above 3.7 Ghz???

Thanks in advance,

Tim Miller
ee.ecn.purdue.edu!miller

289. Who uses 1.3-2.0 Ghz?

Newsgroup: rec.ham-radio
Date: 1988-10-23 20:53:15 UTC
From: cyamamot@nunki.usc.edu
Message-ID: <1726@nunki.usc.edu>
Source record: 19578
Cross-posted to: sci.electronics,rec.ham-radio

Can any kind soul out there tell me who operates between 1.3 and 2.0 Ghz?
Is there anything worth listening to on AM/FM/SSB that doesn't need some sort
of decryption box?

Cliff Yamamoto
Internet: cyamamot@castor.usc.edu castor!cyamamot@oberon.usc.edu
cyamamot@nunki.usc.edu

290. Radio Schmuck Compass

Newsgroup: rec.ham-radio
Date: 1988-10-27 22:26:48 UTC
From: charlie@oakhill.UUCP
Message-ID: <1623@radio.oakhill.UUCP>
Source record: 19579
Cross-posted to: rec.ham-radio,sci.electronics

There have been some discussions on the net here about the RS flux gate compass. Flux gate magnetometers make good metal detectors. People use these things and drag them through the water to detect large metallic submerged objects.

Has anyone given thought to how this RS beastie could be converted to detecting metallic objects? Or does it already detect objects that distort the earth's magnetic field?? What are the sensitivity considerations involved? Anybody out there a flux gate jock??

c.d.t WB4HVD

291. Unit nomenclature (Was Disk transfer speed)

Newsgroup: rec.ham-radio
Date: 1988-11-06 06:16:09 UTC
From: poynton%vector@Sun.COM
Message-ID: <76349@sun.uucp>
Source record: 19580
Cross-posted to: comp.sys.next,sci.electronics,rec.ham-radio

I propose some nomenclature which might reduce the incidence of confusion about data rates which has surrounded the recent SCSI discussions on comp.sys.next.

First, international standards.

Upper case "M" is the symbol for mega, a multiplier of 1000000. Little-m is the symbol for milli, 1/1000, and care should be taken not to confuse it with mega.

Lower-case "k" is the internationally-standardized symbol for kilo, a multiplier of 1000. Its being lower case is the exception: all other multipliers greater than unity have upper-case symbols, and ALL multipliers less than unity have lower-case symbols. [The Greek symbol micro is for a multiplier of 1/1000000; but the letter "u" can be substituted without confusion.]

Lower-case "s" is the symbol for second: upper case unit symbols are reserved for units named after individuals, such as "S" for Mr Siemen, "Hz" for Mr Hertz, or "B" for the unit bel [sic], named after Mr Bell. The full name of a unit itself is NOT capitalized whether derived from a proper name or not.

Proper form places a space between the numeric value and the multiplier, no space between the multiplier and the base unit, and no hyphens anywhere.

Now, my proposals.

I suggest adopting upper-case K for 1024. This does not conflict with any international symbols. The use of this upper-case letter is somewhat mnemonic, in that the 1 K is a little larger than 1 k. [The unit symbol K is for kelvin, the unit of absolute temperature, but this is a unit and not a multiplier symbol so there's no conflict.]

I suggest using lower-case "b" for bit, and upper-case "B" for Byte. Neither conflicts with any metric symbols. I use "w" for "word", whose width is context-dependent. [Lower case distinguishes it from the weber, symbol Wb.]

For those who measure data communications rates, all but the most esoteric uses of the unit "baud" should more properly use bits per second, symbol "b/s". All conventional data communications rates are related to 1000 [and not to 1024], for example, 9.6 kb/s.

Big-M is problematic. My custom is to use M for both 1000000 and 1024*1024, and let context determine the interpretation. Little-m, milli, should certainly not be confused with either of these. Rates are nearly always referenced to decimal mulipliers (for example, SCSI 4.8 MB/s, audio 44.1 Mw/s). Multiples of 1024 are generally restricted to describing capacity.

Charles Poynton
poynton@sun.com

292. SAT 96?

Newsgroup: rec.ham-radio
Date: 1988-11-07 21:19:41 UTC
From: rusty@cadnetix.COM
Message-ID: <5045@cadnetix.COM>
Source record: 19581
Cross-posted to: comp.os.os9,rec.ham-radio

Anybody using a SAT (6809) 96 OS/9 system?

Silly minds want to know :-)

(I have one at home, plan to use it for my HAM computer.
Any hacks to use PC clone expansion boards with this thing?
Anyone written nifty ham software for it? etc.)

Thanks muchly.

Rusty Carruth UUCP: {uunet,boulder}!cadnetix!rusty DOMAIN: rusty@cadnetix.com
Cadnetix Corp. (303) 444-8075x296 \ 5775 Flatiron Pkwy. \ Boulder, Co 80301
Radio: N7IKQ 'home': P.O.B. 461 \ Lafayette, CO 80026

293. Re: Unit nomenclature (Was Disk transfer speed)

Newsgroup: rec.ham-radio
Date: 1988-11-09 22:31:12 UTC
From: snoopy@sopwith.UUCP
Message-ID: <55@sopwith.UUCP>
Source record: 19582
Cross-posted to: comp.sys.next,sci.electronics,rec.ham-radio

In article <76349@sun.uucp> poynton%vector@Sun.COM (Charles Poynton) writes:

|Upper case "M" is the symbol for mega, a multiplier of 1000000. Little-m
|is the symbol for milli, 1/1000, and care should be taken not to confuse
|it with mega.

Now if you can just get the people who label capacitors to comply.

```
_____
/_____\ Snoopy "Look Marge, I found a 47 Mega-Farad capacitor!"
/_______\
|___| tektronix!tekecs!sopwith!snoopy
|___| sun!nosun!illian!sopwith!snoopy
```

294. Re: Unit nomenclature (Was Disk transfer speed)

Newsgroup: rec.ham-radio
Date: 1988-11-10 00:48:22 UTC
From: claudio@forty2.UUCP
Message-ID: <520@forty2.UUCP>
Source record: 19583
Cross-posted to: comp.sys.next,sci.electronics,rec.ham-radio

In article <76349@sun.uucp| poynton%vector@Sun.COM (Charles Poynton) writes:
|I propose some nomenclature which might reduce the incidence of confusion
|about data rates which has surrounded the recent SCSI discussions on
|comp.sys.next.
|
|First, international standards.
|
|Upper case "M" is the symbol for mega, a multiplier of 1000000. Little-m
|is the symbol for milli, 1/1000, and care should be taken not to confuse
|it with mega.
|
| .. stuff deleted ..
|
|I suggest adopting upper-case K for 1024. This does not conflict with any
|
| .. stuff deleted ..
| Rates are nearly
|always referenced to decimal mulipliers (for example, SCSI 4.8 MB/s, audio
|44.1 Mw/s). Multiples of 1024 are generally restricted to describing
|capacity.

So why not start to forget about those 1024 and 1024*1024 units ??

claudio

UUCP: claudio@forty2.uucp BITNET: K538912@CZHRZU1A
Mail: Claudio Nieder, Kanalweg 1, CH-8610 Uster

295. Re: Unit nomenclature (Was Disk transfer speed)

Newsgroup: rec.ham-radio
Date: 1988-11-10 17:38:19 UTC
From: mark@adec23.UUCP
Message-ID: <1638@adec23.UUCP>
Source record: 19584
Cross-posted to: comp.sys.next,sci.electronics,rec.ham-radio

In article <55@sopwith.UUCP>, snoopy@sopwith.UUCP (Snoopy T. Beagle) writes:
> Now if you can just get the people who label capacitors to comply.
>
> _____
> /_____\ Snoopy "Look Marge, I found a 47 Mega-Farad capacitor!"
> /_______\
> |___| tektronix!tekecs!sopwith!snoopy
> |___| sun!nosun!illian!sopwith!snoopy

I don't believe it :-). Most of the capacitor makers label their capacitors with the colour code standard or the numbers associated with the colour code standard. eg yellow blue yellow (or 474) is 470000 uF. The other method used is the European standard of using the muliplier as the point placement. eg. 4n7 is 4700 uF or 4.7 nF. I have seen a few (when space permits) to put the units in their entirety. I have seen non that have used upper case letter (keep in mind that a small upper case `m' (smaller than other letters and numbers) is a LOWER case letter).

Does any one know the capacitance of a 60Ah battery, or is it not possible to measure it ?!:-)

-- Mark Salyzyn @ mark%adec23@nexus.ca

296. capacitance of batteries

Newsgroup: rec.ham-radio
Date: 1988-11-13 00:16:57 UTC
From: henry@utzoo.uucp
Message-ID: <1988Nov13.001657.21990@utzoo.uucp>
Source record: 19585
Cross-posted to: sci.electronics,rec.ham-radio

In article <1638@adec23.UUCP> mark@adec23.UUCP (Mark Salyzyn) writes:
>Does any one know the capacitance of a 60Ah battery, or is it not possible
>to measure it ?!:-)

It's certainly measurable -- a battery is essentially a large, polarized,
highly non-linear capacitor -- but it depends on the voltage, which you
didn't specify. 60 Ah is 60*3600 coulombs of charge; capacitance is
charge/voltage. If we assume a car battery (12V), that's an 18 kF capacitor.

(Just to head it off... Anyone who wants to argue about whether a battery
is a capacitor should know that this was hashed out a couple of years ago.
The obvious difference is the non-linearity of the battery, but many
capacitors are detectably non-linear too. Nonlinearity is normally felt
to be a feature in batteries and a bug in capacitors, which is why the
difference in degree.)
--
Sendmail is a bug, | Henry Spencer at U of Toronto Zoology
not a feature. | uunet!attcan!utzoo!henry henry@zoo.toronto.edu

297. Re: capacitance of batteries

Newsgroup: rec.ham-radio
Date: 1988-11-14 14:27:10 UTC
From: feg@clyde.ATT.COM
Message-ID: <36385@clyde.ATT.COM>
Source record: 19586
Cross-posted to: sci.electronics,rec.ham-radio

In article <1988Nov13.001657.21990@utzoo.uucp>, henry@utzoo.uucp (Henry Spencer) writes:
> In article <1638@adec23.UUCP> mark@adec23.UUCP (Mark Salyzyn) writes:
> >Does any one know the capacitance of a 60Ah battery, or is it not possible
> >to measure it ?!:-)
> charge/voltage. If we assume a car battery (12V), that's an 18 kF capacitor.
>
> (Just to head it off... Anyone who wants to argue about whether a battery
> is a capacitor should know that this was hashed out a couple of years ago.
> The obvious difference is the non-linearity of the battery, but many
> capacitors are detectably non-linear too. Nonlinearity is normally felt
> to be a feature in batteries and a bug in capacitors, which is why the
> difference in degree.)

Why should anyone want to gainsay you, Henry? One has only to
look at the output waveform of the rectified output of the
alternator with and without connection to the battery to be
convinced that a large capacitor is involved.

Forrest Gehrke k2bt

298. Soviet Keplerian Data

Newsgroup: rec.ham-radio
Date: 1988-11-15 05:30:24 UTC
From: kd2bd@ka2qhd.UUCP
Message-ID: <677@ka2qhd.UUCP>
Source record: 19587
Cross-posted to: rec.ham-radio,sci.space.shuttle

```
::::::::::::::::::::::
:: KEPLERIAN ORBITAL ::
:: DATA BULLETIN ::
::::::::::::::::::::::

Satellite : PROGRESS 38
Object # : 19486
Element Set : 66
Date Issued : 08Nov88
Epoch Date : 88 313.02426060
Inclination : 51.6257
R.A.A.N. : 48.4390
Eccentricity : 2.3691E-03
Arg. of Per. : 289.8344
Mean Anomaly : 70.1773
Mean Motion : 15.76644003
Drag Factor : 3.1553E-04
Orbit Number : 931
S.M.A. : 6718.02765

Satellite : SOYUZ TM-6
Object # : 19443
Element Set : 79
Date Issued : 08Nov88
Epoch Date : 88 313.02427377
Inclination : 51.6218
R.A.A.N. : 48.4441
Eccentricity : 2.4398E-03
Arg. of Per. : 291.2359
Mean Anomaly : 68.8184
Mean Motion : 15.76628387
Drag Factor : 3.9513E-04
Orbit Number : 1117
S.M.A. : 6718.072

Satellite : KVANT
Object # : 17845
Element Set : 588
Date Issued : 08Nov88
Epoch Date : 88 313.02421801
Inclination : 51.6260
R.A.A.N. : 48.4411
Eccentricity : 2.2820E-03
Arg. of Per. : 294.4285
```

Mean Anomaly : 65.3345
Mean Motion : 15.76667893
Drag Factor : 6.7302E-04
Orbit Number : 9275
S.M.A. : 6717.95978

Satellite : MIR
Object # : 16609
Element Set : 506
Date Issued : 08Nov88
Epoch Date : 88 313.02423711
Inclination : 51.6204
R.A.A.N. : 48.4423
Eccentricity : 2.2713E-03
Arg. of Per. : 294.1491
Mean Anomaly : 65.7218
Mean Motion : 15.76676250
Drag Factor : 1.25877E-03
Orbit Number : 15648
S.M.A. : 6717.93604

Satellite : COSMOS 1686
Object # : 16095
Element Set : 77
Date Issued : 08Nov88
Epoch Date : 88 313.01094867
Inclination : 51.6195
R.A.A.N. : 314.3135
Eccentricity : 4.238E-04
Arg. of Per. : 328.5852
Mean Anomaly : 31.4695
Mean Motion : 15.34665823
Drag Factor : 1.1213E-04
Orbit Number : 17582
S.M.A. : 6839.98266

Satellite : SALYUT 7
Object # : 13138
Element Set : 303
Date Issued : 08Nov88
Epoch Date : 88 313.01094862
Inclination : 51.6147
R.A.A.N. : 314.3080
Eccentricity : 1.514E-04
Arg. of Per. : 17.0511
Mean Anomaly : 343.0464
Mean Motion : 15.34661710
Drag Factor : -5.527E-05
Orbit Number : 37415
S.M.A. : 6839.99488

This orbital data was obtained from NASA and compiled by KD2BD @ NN2Z.

.
w
q

--
UUCP: ucbvax!rutgers!petsd!tsdiag!ka2qhd!kd2bd
PACKET: kd2bd @ nn2z

299. Licence plates

Newsgroup: rec.ham-radio
Date: 1988-11-18 21:19:40 UTC
From: ee5001ae@charon.unm.edu
Message-ID: <3969@charon.unm.edu>
Source record: 19588
Cross-posted to: rec.humor,rec.ham-radio,sci.electronics

Back in August, in the parking lot of an Albuquerque K-mart, I saw the
following licence plate:

71 # MHZ

(# is the "Zia" sun symbol, found on New Mexico licence plates & flags.)

What in the world is allocated at 71 MHz? It's certainly not a ham band...per-
haps government or commercial allocation? Hmmm. Not having a catalog of freq.
allocations, I decided the easiest thing to do was ask the driver what it was.
That's the sort of licence a ham would have, if he wasn't satisfied with just
h(is/er) call.

So, I asked.

The fellow was puzzled. Plainly, he didn't know what I was talking about. That
puzzled me.

After a couple of more exchanges, I got things straight: The car was built in
1971. MHZ were the fellow's initials.

Grrrrr....

Keep :^)ing,
d

PS: W9MKV, let me know if you see this. I'm assured that UNM is again able to
post to the net. -d

--
Always pay careful attention to the man behind the curtain.
Duke McMullan n5gax nss13429r phon505-255-4642 ee5001ae@charon.unm.edu

300. Soviet Keplerian Data 15Nov88

Newsgroup: rec.ham-radio
Date: 1988-11-19 01:03:58 UTC
From: kd2bd@ka2qhd.UUCP
Message-ID: <679@ka2qhd.UUCP>
Source record: 19589
Cross-posted to: rec.ham-radio,sci.space.shuttle

```
::::::::::::::::::::::
:: KEPLERIAN ORBITAL ::
:: DATA BULLETIN ::
::::::::::::::::::::::

Satellite : PROGRESS 38
Object # : 19486
Element Set : 71
Date Issued : 15Nov88
Epoch Date : 88 318.98058261
Inclination : 51.6223
R.A.A.N. : 17.7073
Eccentricity : 2.2296E-03
Arg. of Per. : 313.3152
Mean Anomaly : 46.7871
Mean Motion : 15.77449453
Drag Factor : 3.2662E-04
Orbit Number : 1025
S.M.A. : 6715.74062

Satellite : SOYUZ TM-6
Object # : 19443
Element Set : 84
Date Issued : 15Nov88
Epoch Date : 88 318.98057319
Inclination : 51.6293
R.A.A.N. : 17.7082
Eccentricity : 2.0079E-03
Arg. of Per. : 323.0224
Mean Anomaly : 37.0718
Mean Motion : 15.77481592
Drag Factor : 4.0814E-04
Orbit Number : 1211
S.M.A. : 6715.6494

Satellite : KVANT
Object # : 17845
Element Set : 592
Date Issued : 15Nov88
Epoch Date : 88 317.84021601
Inclination : 51.6224
R.A.A.N. : 23.5950
Eccentricity : 2.2768E-03
Arg. of Per. : 315.8216
```

Mean Anomaly : 44.0899
Mean Motion : 15.77345025
Drag Factor : 6.9397E-04
Orbit Number : 9351
S.M.A. : 6716.03703

Satellite : MIR
Object # : 16609
Element Set : 522
Date Issued : 15Nov88
Epoch Date : 88 319.55067225
Inclination : 51.6240
R.A.A.N. : 14.7608
Eccentricity : 2.2006E-03
Arg. of Per. : 321.2208
Mean Anomaly : 38.7438
Mean Motion : 15.77597427
Drag Factor : 8.3915E-04
Orbit Number : 15751
S.M.A. : 6715.32068

Satellite : COSMOS 1686
Object # : 16095
Element Set : 83
Date Issued : 15Nov88
Epoch Date : 88 318.87135959
Inclination : 51.6146
R.A.A.N. : 285.9135
Eccentricity : 1.182E-04
Arg. of Per. : 55.5913
Mean Anomaly : 304.5220
Mean Motion : 15.34790218
Drag Factor : 1.1258E-04
Orbit Number : 17672
S.M.A. : 6839.61308

Satellite : SALYUT 7
Object # : 13138
Element Set : 315
Date Issued : 15Nov88
Epoch Date : 88 320.23870439
Inclination : 51.6132
R.A.A.N. : 279.2909
Eccentricity : 1.093E-04
Arg. of Per. : 49.6067
Mean Anomaly : 310.4230
Mean Motion : 15.34841812
Drag Factor : 5.6145E-04
Orbit Number : 37526
S.M.A. : 6839.4598

This orbital data was obtained from NASA and compiled by KD2BD @ NN2Z.

--
UUCP: ucbvax!rutgers!petsd!tsdiag!ka2qhd!kd2bd
PACKET: kd2bd @ nn2z

301. MACNET

Newsgroup: rec.ham-radio
Date: 1988-11-28 05:44:35 UTC
From: kriss@AUSTIN.LOCKHEED.COM
Message-ID: <144@killdeer.AUSTIN.LOCKHEED.COM>
Source record: 19590
Cross-posted to: rec.ham-radio,rec.ham-radio.packet,comp.sys.mac

cintosh Packet Radio Net - MACNET -

If you're into RADIO and MACINTOSH computers, send us a packet and join
our most informal (but potentially most informative) Mac Packet Radio Net.
We share questions, answers, concerns, news, comments, and commradery via
packet radio to enable all of us to learn more and have more fun!

To enter MACNET: first send us your LOG IN packet.
The ADDRESS is KB1HE @ WB1DSW (Net Control)

The SUBJECT or TITLE of your message should be MACNET
And your first MACNET packet should contain your:
NAME:
CALL:
QTH:
HOME PBBS: (Where you'll receive each MACNET packet)
MAC MODELS USED:
TNC/DATA CONTROLLER:
PROGRAMS USED FOR RADIO:
RADIO MODELS USED:
MAC INTERESTS:
RADIO INTERESTS:
HINTS'N KINKS: (TIPS, QUESTIONS and ANSWERS)
OTHER MAC CONNECTIONS/INTERFACES: (BCS, COMPUSERVE, ETC)
ADDITIONAL COMMENTS/QUESTIONS FOR MACNET MEMBERS:

Your LOG IN and all future packets to MACNET NET CONTROL will be repeated
to each MACNET member automatically. Share your thoughts with MACNET and
make MACNET transmissions anytime.

Present members include: K1BT @ KQ1K - Tom, WB8EHS @ WB1DSW - Daniel,
N1FMK @ K1UGM - Dan, VE2ESM @ VE2CSC - Jacques, WA2BSR @ K1UGM - Spencer,
KA1ACP @ W1KOO - Bruce, NS1C @ NS1N - Ken, VE3NVF @ VE3JF - John, K1OPQ
@ WA1FHB -Dave, AB1X @ WA1RAJ - Mark, and KB1HE @ WB1DSW - John.

Log in and join the fun! - 73, John - MACNET "NET CONTROL" - KB1HE @ WB1DSW

Relayed by:
Tad, KT7H @ KE7OM to

Ray N6PHJ @ N6IIU to

Dick KD5VU @ KB5PM to

POSTED BY Dick Kriss, KD5VU
kriss@lockheed.austin.com (ARPANet)

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302. HAM RADIO and the ATARI ST

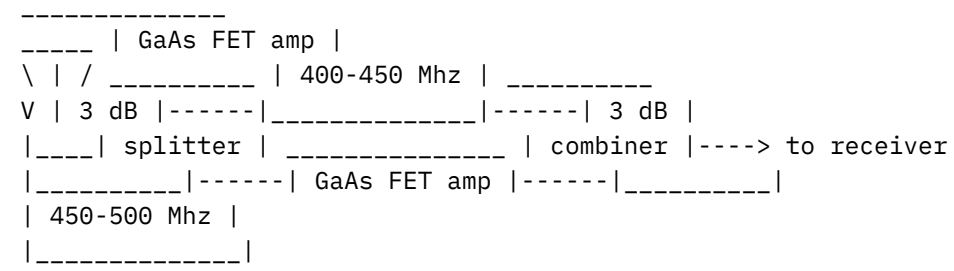
Newsgroup: rec.ham-radio
Date: 1988-11-28 20:38:26 UTC
From: mn@atari.UUCP
Message-ID: <1247@atari.UUCP>
Source record: 19591
Cross-posted to: rec.ham-radio,comp.sys.atari.st

Does anyone have or know of public domain software for the Atari ST that is of help to ham radio? In particular I need software for RTTY and CW.

303. RF preamp techniques

Newsgroup: rec.ham-radio
Date: 1988-11-29 20:22:23 UTC
From: cyamamot@nunki.usc.edu
Message-ID: <2038@nunki.usc.edu>
Source record: 19592
Cross-posted to: sci.electronics,rec.ham-radio

Greetings
I have an arbitrary question regarding RF preamps, splitters, and
combiners. Does the following look feasible?



Would there be too much noise introduced by the splitter and combiner
to be of any use? Or is it better to select one amp and operate it at 450Mhz
without the splitter/combiner? If I use ONE amp, is it possible for an amp to
have a negative dB effect (i.e. attenuation) at the extremes?

Example : if I wished to monitor two signals at 425Mhz and 475Mhz would:
1) the above diagram using two amps having a noise figure of 0.5dB
and some gain X dB be better
OR is
2) one amp with a 400-500Mhz range, but higher NF and lower gain
better. (tuned to center of 450Mhz)

In short my question is : What do you do if you want to pre-amplify a wide
frequency range with high gain and low noise, but DO NOT have an amp with such
a wide BW available.

Cliff Yamamoto

Internet : cyamamot@castor.usc.edu castor!cyamamot@oberon.usc.edu
cyamamot@nunki.usc.edu cyamamot%nunki.usc.edu@oberon.usc.edu

304. Re: RF preamp techniques

Newsgroup: rec.ham-radio
Date: 1988-11-30 17:20:50 UTC
From: dya@unccvax.UUCP
Message-ID: <1252@unccvax.UUCP>
Source record: 19593
Cross-posted to: sci.electronics,rec.ham-radio

In article <2038@nunki.usc.edu>, cyamamot@nunki.usc.edu (Cliff Yamamoto) writes:
> Greetings
> I have an arbitrary question regarding RF preamps, splitters, and
> combiners. Does the following look feasible?
> _____
> _____ | GaAs FET amp |
> \ | / _____ | 400-450 Mhz | _____
> V | 3 dB |------|_____|------| 3 dB |
> |____| splitter | _____ | combiner |----> to receiver
> |_____|------| GaAs FET amp |------|_____|
> | 450-500 Mhz |
> |_____|

Feasable and doable, but probably not as good as a well
designed 400-500 mHz amplifier.

You should be able to build a reasonable GaAs preamp
with an 0.5 - 0.7 dB noise figure with conventional microwave
transistors. The first splitter will have an insertion loss
associated with it (-3 dB); add it to your noise figure cal-
culation. That signal is gone **forever**. As long as your
amp is quieter than 3.5 dB, the single amp is better.

Also, without good design, there will be differing
propagation delays through the two amplifiers. When the
two signals finally do sum in the other combiner, you
may find marked gain reduction for some frequencies and
excessive gain for others.

If you **must** listen to 425 and 475 mHz, you
could do separate amplifiers for each frequency, and switch
between them. This will give some improvement, due to lower
noise bandwidth and the ability to obtain a conjugate impedance
match for the antenna system at the amplifier input.

The broadband amp stinks in one respect, though;
if you have a strong RF source nearby (say, a TV station
on channel 18) it will be overloaded. Conventional slotted
line tecniques can null out that junk, though.

There are numerous other considerations, but the
fact that there is attenuation in the input of the first
amplifier simply adds that attenuation to the first stage
noise figure.

York David Anthony
WKTD Wilmington, NC

305. Re: RF preamp techniques

Newsgroup: rec.ham-radio
Date: 1988-11-30 20:57:07 UTC
From: dvh@cci632.UUCP
Message-ID: <23211@cci632.UUCP>
Source record: 19594
Cross-posted to: sci.electronics,rec.ham-radio

I wouldn't recommend a 3dB splitter before either preamp.
If you do this, you are automatically degrading the system
noise figure by the 3dB loss of the splitter- same as if you had
3dB of cable loss between the antenna and the preamp.

I believe the answer is to build (or purchase) a wider
bandwidth preamp. Avantek has an application note describing
a GaAsFET preamp with about a 0.4dB NF and about 20dB gain
which has an untuned input (matched to 50 ohms) using the
ATF10135 device and which will have excellent performance
over AT LEAST 100 MHz. Check it out.

Put the preamp as close as possible to the antenna and
then run about as much coax down to the receiver as you want-
you'll have plenty of excess gain. This eliminates all the
splitters and combiners. In fact you could put a splitter
after the preamp and use it to drive a couple of receivers
and still have enough gain for both.

Hope this helps. 73 Dave KD5RO

306. Re: RF preamp techniques

Newsgroup: rec.ham-radio
Date: 1988-11-30 21:10:15 UTC
From: dvh@cci632.UUCP
Message-ID: <23212@cci632.UUCP>
Source record: 19595
Cross-posted to: sci.electronics,rec.ham-radio

I forgot to add that the Avantek preamp circuit is specified from 400-500 MHz. They also, in the same app. note, talk about designs for the 900 MHz and 1300 MHz bands.

Also, the reason you don't want the preamp after the lossy splitter (or cable) is because the system noise figure is primarily determined by the gain and noise figure of the first stage. In this case, the first stage has a 3dB NF, and -3dB gain. Running the noise figure cascade on this system, with a 0.4dB preamp after the splitter, will yield a noise figure cascade somewhere in the 2dB range.

After the preamp, you can play a lot of games,for the same reason- the first stage determines the overall noise figure- assuming the preamp has enough stage gain to overcome the loss and noise of the following stage(s). Therefore, if you have a preamp with a 0.4dB NF and 20dB gain at the antenna, you can overcome a lot of loss after the preamp and still retain most of that excellent performance.

I think I got it all out this time.

73 Dave KD5RO

307. Re: HAM RADIO and the ATARI ST

Newsgroup: rec.ham-radio
Date: 1988-12-01 05:59:45 UTC
From: Adam_I_Borin@cup.portal.com
Message-ID: <11971@cup.portal.com>
Source record: 19596
Cross-posted to: rec.ham-radio,comp.sys.atari.st

I am also interested in learning about RTTY software, preferably sharware. I am studying for my Novice license and would like to interface my ST to my receiver to receive RTTY and/or convert morse code.

sun!portal!cup.portal.com!adam_i_borin

308. Flashtube info sought

Newsgroup: rec.ham-radio
Date: 1988-12-01 07:17:29 UTC
From: ee5001ae@charon.unm.edu
Message-ID: <4033@charon.unm.edu>
Source record: 19597
Cross-posted to: rec.ham-radio,sci.electronics

Our local electronics surplus shop has acquired a few impressive-looking
flashtubes with octal bases and glass envelopes around a 5-turn coiled tube
with the legend:
Amglo
78R9D

and a few patent numbers on the base.

We have no data at all on these things, and I'm wondering if anyone out there
knows either the data or a likely source for the data on this tube.

I don't need to say it, but I will anyway. We need to know:

o Pin-out for the base
o Maximum and minimum electrode voltages
o Maximum and minimum trigger voltages
o Maximum power rating in joules (watt-seconds to the unwashed)
o Any special info about the characteristics of the energy storage
capacitors these things need.
o Maximum and minimum light outputs

Better Caving through Electrical Stuff,
d

--
Always pay careful attention to the man behind the curtain.
Duke McMullan n5gax nss13429r phon505-255-4642 ee5001ae@charon.unm.edu

309. Re: HAM RADIO and the ATARI ST

Newsgroup: rec.ham-radio
Date: 1988-12-01 19:35:11 UTC
From: mn@atari.UUCP
Message-ID: <1250@atari.UUCP>
Source record: 19598
Cross-posted to: rec.ham-radio,comp.sys.atari.st

Since I've had no response from anyone on this system about interfacing the ST with ham radio I've decided to hack it out myself. I've got it working but it still needs more debugging. It's actually quite simple to set up the serial port for RTTY but you have to create a lookup table for the translations.
I'm using an MFJ (1229 I think is the model #) with an Icom R-70. Will let you know when the program is working pretty good and is ready for distribution.
Good luck on your novice test!

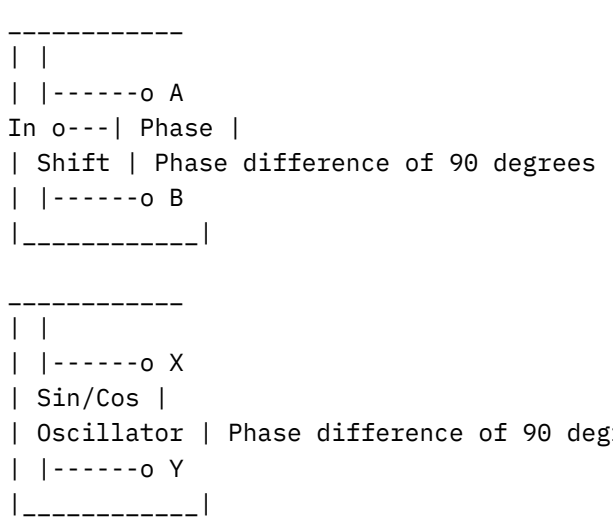
73!

Mike Nowicki N6LUU
Atari Corp. Sunnyvale, CA

310. SSB Generation Techniques (long question)

Newsgroup: rec.ham-radio
Date: 1988-12-03 03:18:13 UTC
From: bobk@mntgfx.mentor.com
Message-ID: <1988Dec2.191815.3915@mntgfx.mentor.com>
Source record: 19599
Cross-posted to: sci.electronics,rec.ham-radio,rec.audio,rec.music.synth

I've been thinking about using SSB techniques to shift the spectrum
of audio signals in the audio range by frequencies ranging from 0.2
to 20 Hz. The obvious way to do this with analog electronics is with
the phasing method:



Output is A*X + B*Y or A*X - B*Y, depending on
whether you want the upper or lower sideband.

The design of phase shift networks usually involves collections
of all-pass filters whose differential phase shift is 90 degrees
over a wide range of frequency. I understand that this approximates
a Hilbert transform.

My questions are:

How are the corner frequencies of the all-pass networks derived?
I would like to design an analog phase shift network that works
well over the entire audio range, say 20-20KHz.

How can a similar thing be done with a digital signal processor?
Assuming a DSP is available, what's the best way to accomplish
this task?
--
Robert Kelley, Software Engineer 503-626-1278
Mentor Graphics Corp., 8500 SW Creekside Place, Beaverton OR 97005
...!{sequent,tessi,apollo}!mntgfx!bobk OR bobk@pdx.MENTOR.COM
These are my opinions, & not necessarily those of Mentor Graphics.

311. STS-27 elements, sightings

Newsgroup: rec.ham-radio
Date: 1988-12-03 21:47:54 UTC
From: karn@ka9q.bellcore.com
Message-ID: <12309@bellcore.bellcore.com>
Source record: 19600
Cross-posted to: rec.ham-radio,sci.space.shuttle

Posted: Fri Dec 2, 1988 6:26 PM GMT Msg: AGII-3823-6697
From: BBARD
To: AMSAT
Subj: STS 27 Elements?

Here are some possible elements for STS 27. No idea as to
how accurate they may be. Based on earlier information
published in the press and Aviation Week. Let me know
if anyone sights it. Based on a 240 mi orbit inclined at
57 deg. ---Bill

Satellite STS 27
NORAD Number 09999
Int Des 1988 999A
Epoch 88 337.60144000 12/2/88 at 1426:04 UTC
Drag 0.00040000 Rev/Day^2
Element Set 1
Inclination 57.0000 Deg
RAAN 189.0600 Deg
Eccentricity 0.00000000
Argument of Perigee 0.0000 Deg
Mean Anomaly 0.0000 Deg
Mean Motion 15.60000000 Rev/Day
Epoch Revolution 1

Semimajor Axis 6765.7 Km
Period 92.31 Min
Apogee 387.59 Km
Perigee 387.59 Km

Posted: Sat Dec 3, 1988 1:21 AM GMT Msg: IGII-3824-2111
From: RWALLIO
To: amsat
Subj: Possible STS-27/payload sighting

Thanks to Bill Bard's STS-27 elements, I have the following sighting
report. Assuming its confirmed by other observations to be STS-27 and its
released payload, this has been a real thrill ... thanks Bill!

From 41.43788889N by 93.56797222W I observed two bright objects flying
in formation from my western sky to my southern sky. At approximately
03Dec 00:21:26utc they were in my southwest sky at approximately 30-degrees
elevation. LOS was at 00:26:30utc at approximately 160-degrees azimuth.
The objects were very dim at LOS and slightly above my southern horizon so an
eclipse may have occurred.

Both objects were of equal magnitude. They were easily observable with the naked eye at maximum elevation but very dim and barely observable with 7x35 glasses at LOS. Their positions appeared to diverge as they moved to my south.

These observations compare very well with predictions based on Bill's elements except that they occurred approximately 7.5-minutes later.

Good hunting.

Regards, Ralph Wallio, W0RPK

312. Predictions for viewing ATLANTIS

Newsgroup: rec.ham-radio
Date: 1988-12-04 03:01:17 UTC
From: kd2bd@ka2qhd.UUCP
Message-ID: <699@ka2qhd.UUCP>
Source record: 19601
Cross-posted to: rec.ham-radio,sci.space.shuttle

Well, Shuttle ATLANTIS was launched on Friday morning shortly after
9:30 AM EST on a Department of Defense mission. One of the goals of
this mission will be to deploy a KH-12 Soviet spy satellite into an
eliptical orbit that will allow it to cover 80% of the Soviet Union.

There are many who believe that ATLANTIS will be visible over North
America on this flight. Since it is a DoD mission, no orbital data
has been made available to the public.

Orbital data for ATLANTIS has been formulated here at KD2BD.
The data is based solely on assumptions and knowing the time of launch.
The following data is believed to closely match the orbit of ATLANTIS:

ORBITAL INCLINATION : 57 Degrees
ORBITAL ALTITUDE : 340 Kilometers
NODAL PERIOD : 91.2 minutes/orbit
LONGITUDINAL INCREMENT : 23.15 degrees west/orbit
SEMI-MAJOR AXIS : 6711 Kilometers
ORBITAL VELOCITY : 17,234 miles/hour
REFERENCE ORBIT : 14:15 UTC at 100 degrees west (Orbit 0)

From this information, the following orbital predictions have been made.
These are the times when I believe ATLANTIS will be visible over our area.

On Sunday 04Dec88: From 4:25 -to- 4:40 PM. It will rise in the Northwest,
pass towards the south, and set towards the Southeast.
On Monday 05Dec88: From 4:45 -to- 5:05 PM. It will rise in the West-Northwest,
pass towards the south, and set towards the South-Southeast.

The KH-12 spy satellite is rumored to be quite large and could also be
visible as it is deployed from ATLANTIS. This could make for SPECTACULAR
viewing if the weather is clear.

If visible, ATLANTIS will appear as a fast moving "star" growing in brilliance
as it moves from West to East. It will be the brightest object in the
sky, and can be seen without the aid of a telescope or binoculars.

I recommend allowing several minutes (+/-) from the above predictions to allow
for small errors. The directions may be different (it may cross the North,
rather than the South, BUT IT WILL BE VISIBLE ON THE DAYS LISTED).

If you succeed in seeing ATLANTIS, drop me a note on NN2Z-4. I would
appreciate hearing about your observations. Don't forget to include the
day(s) and time(s) you viewed the Shuttle.

Good Luck and 73! de John KD2BD @ NN2Z

--
UUCP: ucbvax!rutgers!petsd!tsdiag!ka2qhd!kd2bd
PACKET: kd2bd @ nn2z

313. Re: Predictions for viewing ATLANTIS

Newsgroup: rec.ham-radio
Date: 1988-12-04 20:21:57 UTC
From: karn@ka9q.bellcore.com
Message-ID: <12337@bellcore.bellcore.com>
Source record: 19602
Cross-posted to: rec.ham-radio,sci.space.shuttle

The estimates I've seen for the altitude of Atlantis's orbit (and that of its payload) range from 340 km (just above a standard shuttle orbit) up to 458 km (the eleset posted by Rich, snowdog@athena.mit.edu). I think the higher altitude is more likely, considering that the lifetime of a payload in the lower orbit would be measured in weeks or months. (Rich also reports fairly consistent sightings based on his elements, so that tends to confirm the 458 km figure).

Even at this altitude, an orbit isn't particularly long-lived. With the currently increasing levels of solar activity, I wouldn't expect an unboosted payload in this orbit to last more than a couple of years at the most.

Given the reported cost of this spacecraft, I suspect that it has some sort of onboard boost system. It's also quite likely that we'll be seeing some return visits by future shuttle missions for refueling. It should be fairly easy to tell when this happens, since any future launch would have to match the satellite's orbital plane.

Phil

314. LCD clock mods - for 24 hour format

Newsgroup: rec.ham-radio
Date: 1988-12-05 21:16:03 UTC
From: wwg@brambo.UUCP
Message-ID: <423@brambo.UUCP>
Source record: 19603
Cross-posted to: sci.electronics,rec.ham-radio

I've been looking for a cheap, off the shelf digital clock to keep
(you guessed it), UTC time. However, the new clocks don't seem to
have a 24 hour format option/switch. What's worse, the store people
don't even know what 24 hour format is!! I had one sales guy say "ya,
sure. Its got the AM light here, and the PM light there...". Grrrrrr!!!!

My guess is that *all* of them are capable of 24 hour format. Just requires
one pin to be grounded or tied high. But I don't want to spend $20 to
find out that it has an unrecognizable Japaneez part # in it.

My preference is for a *big* LCD clock, due to lower currents thus less RFI.
So my question is:

What makes can be easily modified to show 24 hour format, and which
pins are involved? Surely several of you have already been through
this... so *gasp*, *help*...

Tnx in advance.

--
73s de VE3WWG (Warren).............LSI represents Large Scale Investment,
.................transistors are "discrete", but tubes are just plain fun.
................Bramalea Software Systems Inc...!utgpu!telly \ !brambo!wwg
..................!{uunet!mnetor, watmath!utai}!lsuc!ncrcan /

315. Re: Predictions for viewing ATLANTIS

Newsgroup: rec.ham-radio
Date: 1988-12-05 22:31:12 UTC
From: sw@whuts.ATT.COM
Message-ID: <5144@whuts.ATT.COM>
Source record: 19604
Cross-posted to: rec.ham-radio,sci.space.shuttle

In article <699@ka2qhd.UUCP>, kd2bd@ka2qhd.UUCP (Wall Township NJ) writes:
> ..... One of the goals of
> this mission will be to deploy a KH-12 Soviet spy satellite into an
^^^^^^

I knew the Soviets were offering to launch US satellites, but the US
launching a Soviet one....? :-)

(There are plenty of other places around the world where this spy satellite
might want to have a look - not just the Soviet Union.)

--

There are lies, damned lies | Stuart Warmink, Interface Systems
and statistics... | <att!>whuts!sw Whippany NJ USA
-----------> My opinions are not necessarily those of my employer <-----------

316. Soviet Keplerian Data 01Dec88 SKE01DEC88

Newsgroup: rec.ham-radio
Date: 1988-12-06 03:25:14 UTC
From: kd2bd@ka2qhd.UUCP
Message-ID: <706@ka2qhd.UUCP>
Source record: 19605
Cross-posted to: rec.ham-radio,sci.space.shuttle

```
Bulletin ID: SKE01DEC88

NOTE: PROGRESS 38, OBJECT 19486, DECAYED IN THE EARTH'S ATMOSPHERE ON 23NOV88.

::::::::::::::::::::::
:: KEPLERIAN ORBITAL ::
:: DATA BULLETIN ::
::::::::::::::::::::::

Satellite : SOYUZ TM-6
Object # : 19443
Element Set : 99
Date Issued : 01Dec88
Epoch Date : 88 335.93404747
Inclination : 51.6235
R.A.A.N. : 290.6369
Eccentricity : 2.5640E-03
Arg. of Per. : 110.1567
Mean Anomaly : 250.1333
Mean Motion : 15.72120607
Drag Factor : 5.5263E-04
Orbit Number : 9636
S.M.A. : 6730.9078

Satellite : KVANT
Object # : 17845
Element Set : 604
Date Issued : 01Dec88
Epoch Date : 88 334.72618013
Inclination : 51.6244
R.A.A.N. : 296.8197
Eccentricity : 2.4662E-03
Arg. of Per. : 103.4303
Mean Anomaly : 256.5058
Mean Motion : 15.71987260
Drag Factor : 5.4863E-04
Orbit Number : 9617
S.M.A. : 6731.28844

Satellite : MIR
Object # : 16609
Element Set : 559
Date Issued : 01Dec88
Epoch Date : 88 336.31545794
Inclination : 51.6237
```

R.A.A.N. : 288.6816
Eccentricity : 2.4161E-03
Arg. of Per. : 108.3900
Mean Anomaly : 251.9938
Mean Motion : 15.72153115
Drag Factor : 6.0305E-04
Orbit Number : 16015
S.M.A. : 6730.81502

Satellite : COSMOS 1686
Object # : 16095
Element Set : 98
Date Issued : 01Dec88
Epoch Date : 88 335.86387782
Inclination : 51.6085
R.A.A.N. : 203.5676
Eccentricity : 1.689E-04
Arg. of Per. : 121.4483
Mean Anomaly : 238.6868
Mean Motion : 15.35111725
Drag Factor : 1.1379E-04
Orbit Number : 17933
S.M.A. : 6838.65807

Satellite : SALYUT 7
Object # : 13138
Element Set : 335
Date Issued : 01Dec88
Epoch Date : 88 335.79877769
Inclination : 51.6093
R.A.A.N. : 203.8860
Eccentricity : 1.683E-04
Arg. of Per. : 102.5313
Mean Anomaly : 257.5909
Mean Motion : 15.35109317
Drag Factor : 4.308E-05
Orbit Number : 37765
S.M.A. : 6838.66522

This orbital data was obtained from NASA and compiled by KD2BD @ NN2Z.

--
UUCP: ucbvax!rutgers!petsd!tsdiag!ka2qhd!kd2bd
PACKET: kd2bd @ nn2z

317. 63 Watt switching power supply

Newsgroup: rec.ham-radio
Date: 1988-12-06 13:38:36 UTC
From: root@conexch.UUCP
Message-ID: <15386@conexch.UUCP>
Source record: 19606
Cross-posted to: misc.forsale,comp.sys.ibm.pc,sci.electronics,rec.ham-radio

I B M - P C 6 3 W A T T P O W E R S U P P L Y

Original 63 watt power supply manufactured by IBM for the IBM-PC.
This switching supply provides the following:

+5 volts @ 7 Amps
-5 volts @ 0.3 Amps
+12 volts @ 2 Amps
-12 volts @ 0.25 Amps

120 Volt input voltage.

Asking $25. Reply to this article or phone (714) 842-2862 to make offer.
--
USPS: The Consultants' Exchange, PO Box 12100, Santa Ana, CA 92712
TELE: (714) 842-6348: BBS (N81); (714) 842-5851: Xenix guest account (E71)
UUCP: conexch Any ACU 2400 17148425851 ogin:-""-ogin:-""-ogin: nuucp
UUCP: ...!uunet!turnkey!conexch!root || ...!trwrb!ucla-an!conexch!root

318. Re: RF preamp techniques

Newsgroup: rec.ham-radio
Date: 1988-12-06 17:55:05 UTC
From: dvh@cci632.UUCP
Message-ID: <23443@cci632.UUCP>
Source record: 19607
Cross-posted to: sci.electronics,rec.ham-radio

In article <23212@cci632.UUCP>, dvh@cci632.UUCP (David Hallidy) writes:
>
>
> I forgot to add that the Avantek preamp circuit is specified
> from 400-500 MHz. They also, in the same app. note, talk
> about designs for the 900 MHz and 1300 MHz bands.
>
> Also, the reason you don't want the preamp after the lossy
> splitter (or cable) is because the system noise figure is
> primarily determined by the gain and noise figure of the
> first stage. In this case, the first stage has a 3dB NF, and
> -3dB gain. Running the noise figure cascade on this system,
> with a 0.4dB preamp after the splitter, will yield a noise
> figure cascade somewhere in the 2dB range.
>
> After the preamp, you can play a lot of games,for the same
> reason- the first stage determines the overall noise figure-
> assuming the preamp has enough stage gain to overcome the
> loss and noise of the following stage(s). Therefore, if you
> have a preamp with a 0.4dB NF and 20dB gain at the antenna,
> you can overcome a lot of loss after the preamp and still
> retain most of that excellent performance.
>
> I think I got it all out this time.
>
> 73 Dave KD5RO
>

Boy, sometimes I REALLY do it!!! It was pointed out
to me that the noise figure cascade as described in the second
paragraph of this follow-up is incorrect. IT SURE IS!!!
The correct system noise figure for the scenario described
above is actually (by my now questionable calculations) 3.3dB.
It isn't possible for the system, as described, to have a
noise figure lower than the noise contribution of the first
stage, and since the second stage isn't totally noiseless,
it also has to be factored in (which I did do, just wrong).
In the cascade formula, the gain of the first stage is required
in the denominator of the part of the equation relating to the
second stage contribution. I did include it, but as a decibel
expression, not as a RATIO- since the equation works in raios,
this really changes the result!!! As I said, sometimes I
really do it.

Bottom line is, put the preamp at the antenna and you won't have any problems. 20% bandwidth is no problem to achieve and you should keep an excellent system noise figure across the 400-500 MHz range.

I hope this is finally right. (THANX GLEN FOR THE EMAIL POINTING THIS OUT)

73 Dave KD5RO

319. Re: LCD clock mods - for 24 hour format

Newsgroup: rec.ham-radio
Date: 1988-12-06 18:58:05 UTC
From: boettche@gumby.cs.wisc.edu
Message-ID: <2111@puff.cs.wisc.edu>
Source record: 19608
Cross-posted to: sci.electronics,rec.ham-radio

In article <423@brambo.UUCP> wwg@brambo.UUCP (Warren W. Gay) writes:
>I've been looking for a cheap, off the shelf digital clock to keep
>(you guessed it), UTC time. However, the new clocks don't seem to
>have a 24 hour format option/switch. What's worse, the store people
>don't even know what 24 hour format is!! I had one sales guy say "ya,
>sure. Its got the AM light here, and the PM light there...". Grrrrrr!!!!

>My preference is for a *big* LCD clock, due to lower currents thus less RFI.
>So my question is:
>
>What makes can be easily modified to show 24 hour format, and which
>pins are involved? Surely several of you have already been through
>this... so *gasp*, *help*...
>
Modify the clock? Why? Radio Shack has a 12/24 hour Digital LED
clock (part # 63-805) with a 1.8" display. It seems to fit the bill
for what yo want.

****
Michael Boettcher boettche@gumby.cs.wisc.edu
Student, Univ. of Wisconsin 107 N. Randall Apt. I
Applied Math, Engr. and Physics Madison, WI 53715
****

320. Re: LCD clock mods - for 24 hour format

Newsgroup: rec.ham-radio
Date: 1988-12-06 19:01:58 UTC
From: boettche@gumby.cs.wisc.edu
Message-ID: <2112@puff.cs.wisc.edu>
Source record: 19609
Cross-posted to: sci.electronics,rec.ham-radio

>>this... so *gasp*, *help*...
>>
>Modify the clock? Why? Radio Shack has a 12/24 hour Digital LED
>clock (part # 63-805) with a 1.8" display. It seems to fit the bill

SORRY, I forgot to mention:

Yes, indeed, ladies and gentleman,.... only $19.95

****
Michael Boettcher boettche@gumby.cs.wisc.edu
Student, Univ. of Wisconsin 107 N. Randall Apt. I
Applied Math, Engr. and Physics Madison, WI 53715
****

321. Modifying Electronics, LED clocks, Hobbies

Newsgroup: rec.ham-radio
Date: 1988-12-07 22:48:41 UTC
From: awpaeth@watcgl.waterloo.edu
Message-ID: <7188@watcgl.waterloo.edu>
Source record: 19610
Cross-posted to: sci.electronics,rec.ham-radio

In <2082@puff.cs.wisc.edu> perry@garfield.CS.WISC.EDU (Russell Perry) writes:
>I've had this idea to take a LED clock and make it display something other than
>the time, but I don't know much about the things enough to rip it open and
>experiment. Does anyone know how I could go in and change the display...

As Henry Spencer has pointed out, this is near impossible.
If you are set on "hacking" a wrist-watch, here are two suggestions:

(1) remove the crystal and file it down slightly (to reduce its mass). If you
can make it run at 366/365 normal it will now tell "star" (sidereal) time.
Graphite pencil lead can weight it back up again should you overshoot.
(This technique was used by hams before freq synthesis became common).

(2) Buy a Casio-style "databank" watch. I've seen them at K-mart for $75CDN.
They include a 4x10 char display (5x7 dot characters). If you are of
hobbiest persuasion, then you can try to masquerade the signals sent to
the watch by its docking port and get interesting text to appear.

This entire subject highlights a lament of mine. As consumer electronics
become more integrated (figuratively and literally) we trade off the pro's
of mass-produced, inexpensive, one-chip designs agains the con's of having
virtually no end-user means to tweak said device into a related application.

For instance, I know of a EE-hobbiest in LA who wanted to wire up all rooms in
his dream house with Star Trek-like "control panels". Mark decided that it was
cheapest to place a LCD pocket television in each room and assign a unique UHF
channel to it. However, this implied that he could no longer address pixels
directly. Instead, he would have to send a modulated video signal (I'm not sure
if he finished). For him, the good news was lots of scanning and drive logic
electrically and physically matched to the LCDs, in a small, package at less
than $100 per station (and maybe you could put the +12 on the coax and just
run one cable?) The bad news was that he couldn't get around the tuner and
demodulaton function implicit in a chip meaning he has to emulate a small UHF
tv station to "talk" any station.

/Alan Paeth
Computer Graphics Laboratory
University of Waterloo

322. Looking for code practice programmes (Atari ST flavor)

Newsgroup: rec.ham-radio
Date: 1988-12-10 14:15:09 UTC
From: goldman@hall.cray.com
Message-ID: <12019@hall.cray.com>
Source record: 19611
Cross-posted to: rec.ham-radio,misc.wanted,comp.sys.atari.st

Hello! I've seen *lots* of C-64, Apple and IBM programmes to help
one learn the code. I'm looking for programmes to run on an Atari ST.
520 or Mega-4, Colour or Monochrome; I want them!

A class would be nice but impossible, both my wife and I are vampires.

later...
--
Matthew Goldman (612) 936-9675

I dream of ancient days...
.... .. - .... . .-. . .-.-.

323. Re: Modifying Electronics, LED clocks, Hobbies

Newsgroup: rec.ham-radio
Date: 1988-12-10 18:53:46 UTC
From: jbn@glacier.STANFORD.EDU
Message-ID: <17888@glacier.STANFORD.EDU>
Source record: 19612
Cross-posted to: sci.electronics,rec.ham-radio

Often, if you look real hard, and you get lots of databooks, and you call people at semiconductor companies, and you have an adequate knowledge of spoken technical Japanese, you can get inside consumer electronics and do things. Rather than taking apart a Fisher-Price camcorder, for example, you can get the chips from Sanyo. Rather than trying to use a TV set as a monitor, you can get a flat-screen small monitor from Sony left over from their Watchcam line. It's not hopeless. But it's not easy.

John Nagle

324. 200XLT battery consumption -- part 2

Newsgroup: rec.ham-radio
Date: 1988-12-11 02:41:48 UTC
From: parnass@ihuxz.ATT.COM
Message-ID: <3697@ihuxz.ATT.COM>
Source record: 19613
Cross-posted to: rec.ham-radio,sci.electronics

x-------------- CUT HERE ------------------------------------x

BATTERY CONSUMPTION OF THE
UNIDEN/BEARCAT 200XLT SCANNER
Part 2

by Bob Parnass, AJ9S

Some Bearcat 200XLT scanner owners don't get the battery life they expect. They report having to recharge the slide on NiCd (Nickel Cadmium) battery pack after as few as only 3-1/2 hours of operation.

Part one of this article discussed the results of several tests made on the 200XLT portable scanner to determine its current consumption.1 Part 2 will continue the discussion and present the results of additional tests.

Low Battery Indicator

As presented in Part 1, the 200XLT low battery indicator begins to flash when battery voltage decreases to 7.2 volts or less. This starts a 10 minute timer within the 200XLT. After the low battery indicator has flashed for 10 minutes, the 200XLT display blanks.

o Experimental results show that even after the 200XLT display goes blank, the radio will continue to draw approximately 50 mA.

In the author's opinion, the display blanking feature is a liability, not an asset, of the 200XLT. The owners' guide claims the 10 minute timer and display blanking sequence is designed to alert the user and prevent the batteries from full discharge. But, this assumes the user will notice the display is blank and take action.

Owners have been known to get up to 2 hours more use from the NiCd battery pack after the low battery indicator begins to flash. They turn the radio off, then back on, which resets the 10 minute timer.2 Uniden should just let

---

1. See "Battery Consumption of the Uniden/Bearcat 200XLT Scanner," by Bob Parnass, AJ9S, in The Radio Enthusiast, December 1988.

2. Be forewarned that turning the radio off and on rapidly in succession may cause the memory to be lost.3 This may be due to a transient voltage spike. A note in November

the low battery indicator flash, omit the timer, and let the user decide what to do and when to do it. This would permit the 200XLT to be used longer.

Measuring BP200 Battery Capacity

The BP200 battery pack contains 6 cells and is rated at 600 mAh. Ron Smithberg experienced short battery life in his 200XLT. We measured the capacity of his battery using a procedure similar to the one recommended by General Electric and Motorola. Basically, we timed how long it took to discharge a fully charged battery using a resistor to draw current at its one hour rate. This test considers NiCd cells measuring 1.0 volts or less as "discharged."

1. We charged Ron's battery for 16 hours using the factory supplied wall power supply.

2. We placed a variable power resistor (approximately 12 ohms) across the battery terminals, and kept it adjusted to draw 600 mA from the battery.

3. We monitored the battery voltage during the entire test. When the pack voltage decreased to 6 volts, we noted the time, and stopped the test.

It took only 44 minutes for the 6 cell pack voltage to decrease from over 8 volts to 6 volts. Thus, the battery capacity was only:

600 mA * 44 minutes

= 26,400 mA-minutes

= 440 mA-hours

After performing the capacity test, Ron recharged his battery for 16 hours then used it immediately. He was then able to get more than 9 hours use, much longer than before. Apparently, Ron's battery was suffering the effects of NiCd memory.

1988 Monitoring Times recommended the addition of a 100 uF capacitor soldered across the battery to prevent transients.

Avoiding NiCd Memory Effect

The owners' literature recommends that 200XLT owners run their batteries down periodically to avoid a NiCd "memory" effect.

o Avoiding the effects of NiCd "memory" is perhaps more important for the 200XLT than it is for other portable radios.

Owners who always recharge their battery packs at the first blink of the low battery indicator will not extract the full capacity of their battery. They will decrease its capacity.

Cell reversal can occur if NiCd batteries are permitted to fall below 1.0 volts per cell. There are at least 2 ways to "run" the battery down safely:

1. As described in the cell capacity test above, discharge the fully charged pack into a 12 ohm, 10 watt resistor until the pack voltage is down to 6 volts. This should take an hour or less. You can prop the battery upside down on a piece of wood with with the battery contacts resting on 2 nails. A 12 ohm resistor and voltmeter should be connected across the nails.

After discharging, recharge the battery for 16 hours.

2. Leave the 200XLT scanner on after the low battery indicator flashes and the LCD display blanks. Periodically remove the battery and measure its voltage. When the battery pack voltage reaches 6 volts, recharge the battery for 16 hours. This method will take longer and it is easier for an owner to forget and let the battery voltage dip too low (below 6 volts). This may cause the loss of programmed frequencies, as well as possible NiCd cell reversal.

For Experimentation:
A 200XLT Quick Charger?

Rather than charge the NiCd batteries through the jack on the battery case rear, you could try charging them using the contacts on the top of the pack. This would bypass the internal charging circuitry. As with the discharging scheme described above, you could position the pack

upside down on a block of wood with 2 nails touching the contacts. Using a constant current, or pseudo-constant

current charger, you could select the desired rate of charge:

charge duration
_____
60 mA 16 hours
96 mA 10 hours
120 mA 8 hours
240 mA 4 hours

Of course, the battery pack must be removed from the 200XLT while charging this way.

The author uses this flexible scheme for recharging the 7.2 V 600 mAh battery pack on a Yaesu FT-23R walkie-talkie.

Conclusion

The low battery alert feature of the Uniden/Bearcat 200XLT is too conservative, and disables the radio prematurely. Owners can get longer use from their NiCd battery packs if they adopt good charging habits, such as discharging their pack down to 6 volts, and charging for 16 hours just before using the radio.

x-------------- CUT HERE ------------------------------------x
--
~~~~~~
Bob Parnass AJ9S, AT&T Bell Laboratories - att!ihuxz!parnass - (312)979-5414
~~~~~~

325. Re: Looking for code practice programmes (Atari ST flavor)

Newsgroup: rec.ham-radio
Date: 1988-12-12 18:26:05 UTC
From: kimes@ihlpe.ATT.COM
Message-ID: <3913@ihlpe.ATT.COM>
Source record: 19614
Cross-posted to: rec.ham-radio,misc.wanted,comp.sys.atari.st

>
>
> Hello! I've seen *lots* of C-64, Apple and IBM programmes to help
> one learn the code. I'm looking for programmes to run on an Atari ST.
> 520 or Mega-4, Colour or Monochrome; I want them!
>
> .... .. - .... . .-. . .-.-.

Hi there yourself.

I have seen several programs for code practice for the 8bit Atari's. If
you can't find one for the ST, you might want to get the Xformer II (it
is shareware) that allows you to run 8bit software on your ST. Also, since
it is probably in BASIC, you might be able to easily convert it to ST BASIC
since there isn't a lot of graphics involved.

Kit Kimes
AT&T--Bell Laboratories
...att!ihlpe!kimes

FACT: A cat has more muscles in its tail than you do in your head.

326. Re: Looking for code practice programmes (Atari ST flavor)

Newsgroup: rec.ham-radio
Date: 1988-12-12 19:07:41 UTC
From: yz2y@vax5.CIT.CORNELL.EDU
Message-ID: <17544@vax5.CIT.CORNELL.EDU>
Source record: 19615
Cross-posted to: rec.ham-radio,misc.wanted,comp.sys.atari.st

```
Dear Vampires,
There is a program on the ATARINET server at the U. of Houston called
MORSE.UUE which is probably what you are looking for.
-Steve Coco

------------------------------------------------------------------------
Steve Coco
yz2y@vax5.cit.cornell.edu "Don't Dream It, Be It!"
YZ2Y@CRNLVAX5 -Richard O'Brien
YZ2Y@CORNELLA
------------------------------------------------------------------------
```

327. Radio Sputnik 10 / 11, Orbital data anyone?

Newsgroup: rec.ham-radio
Date: 1988-12-13 16:37:55 UTC
From: wwg@brambo.UUCP
Message-ID: <433@brambo.UUCP>
Source record: 19616
Cross-posted to: rec.ham-radio,sci.electronics

I am interested in obtaining orbital data for the RS 10/11 Soviet satellite. I've been watching for it, but perhaps I've missed it. If someone would like to post it or email me, I'd appreciate it. It is also known as Cosmos 1861.

All I have is that it is roughly inclined 26 degrees (I think) and orbits take roughly 104 minutes (nearly circular too I think). I'd like to get more precise on this.

I've last heared the beacon on 29.407 Mhz at Dec 13/88 1335z and due to fading I suspect it was just going over my horizon.

My interest in this satellite comes from an economic point of view. With existing HF gear and <= 50 Watts up link, and without directional antennas, I can have some fun here.

Also, if anyone can volunteer a Basic program (yuk, for my yuk, VIC 20 :-) or even better a C program, for tracking this sucker, that will be most appreciated. Even perhaps just a list of major formulas used in the computations.
--
73s de VE3WWG (Warren).............LSI represents Large Scale Investment,
.................transistors are "discrete", but tubes are just plain fun.
.................Bramalea Software Systems Inc...!utgpu!telly \ !brambo!wwg
...................!{uunet!mnetor, watmath!utai}!lsuc!ncrcan /

328. Re: Modifying Electronics, LED clocks, Hobbies

Newsgroup: rec.ham-radio
Date: 1988-12-13 17:38:23 UTC
From: henry@utzoo.uucp
Message-ID: <1988Dec13.173823.16842@utzoo.uucp>
Source record: 19617
Cross-posted to: sci.electronics,rec.ham-radio

In article <17888@glacier.STANFORD.EDU> jbn@glacier.UUCP (John B. Nagle) writes:
> Often, if you look real hard, and you get lots of databooks, and you
>call people at semiconductor companies, and you have an adequate knowledge
>of spoken technical Japanese, you can get inside consumer electronics and
>do things. Rather than taking apart a Fisher-Price camcorder, for example,
>you can get the chips from Sanyo. Rather than trying to use a TV set as
>a monitor, you can get a flat-screen small monitor from Sony left over
>from their Watchcam line. It's not hopeless. But it's not easy.

And, of course, you may discover that taking apart the consumer equipment
is cheaper than buying the parts in quantity one from a distributor, not
to mention a lot less hassle...
--
SunOSish, adj: requiring | Henry Spencer at U of Toronto Zoology
32-bit bug numbers. | uunet!attcan!utzoo!henry henry@zoo.toronto.edu

329. A digital Panadaptor (Spectrum Analyzer) for under $300

Newsgroup: rec.ham-radio
Date: 1988-12-14 14:49:23 UTC
From: cyamamot@nunki.usc.edu
Message-ID: <2153@nunki.usc.edu>
Source record: 19618
Cross-posted to: sci.electronics,rec.ham-radio

I would like to know if anyone has attempted to make/sucessfully made a homebrew analyzer in the digital domain. The ouput would be a list of freqs within the spectrum that exceed a preset level. The vertical resolution doesn't have to be good, an 8-bit video A/D @50MHz should be fine for 10.7 or 21.4Mhz IF signals. And the horizontal resolution has to only be 5kHz (just to pick up NBFM or AM signals at least).

However, if I want (somewhat) real-time capability, don't I need a fast DSP chip? Provided the A/D, memory & DSP cost doesn't exceed $300, how much more support circuitry is needed?

Any pointers toward helpful books/magazines or suggestions for parts, construction and implementation would be appreciated. I hope a project like this at such a cost is not too far fetched.

Cliff Yamamoto

330. Soviet Keplerian Data

Newsgroup: rec.ham-radio
Date: 1988-12-20 03:31:15 UTC
From: kd2bd@ka2qhd.UUCP
Message-ID: <719@ka2qhd.UUCP>
Source record: 19619
Cross-posted to: rec.ham-radio,sci.space.shuttle

```
::::::::::::::::::::::
:: KEPLERIAN ORBITAL ::
:: DATA BULLETIN ::
::::::::::::::::::::::

Satellite : SOYUZ TM-6
Object # : 19443
Element Set : 111
Date Issued : 15Dec88
Epoch Date : 88 349.91128307
Inclination : 51.6224
R.A.A.N. : 218.9662
Eccentricity : 2.4100E-03
Arg. of Per. : 165.5586
Mean Anomaly : 194.3926
Mean Motion : 15.73864925
Drag Factor : 8.2805E-04
Orbit Number : 9856
S.M.A. : 6725.93363

Satellite : KVANT
Object # : 17845
Element Set : 617
Date Issued : 15Dec88
Epoch Date : 88 349.97472435
Inclination : 51.6212
R.A.A.N. : 218.6149
Eccentricity : 1.5888E-03
Arg. of Per. : 172.9400
Mean Anomaly : 186.6426
Mean Motion : 15.73916507
Drag Factor : 1.30728E-03
Orbit Number : 9857
S.M.A. : 6725.78668

Satellite : MIR
Object # : 16609
Element Set : 589
Date Issued : 15Dec88
Epoch Date : 88 349.91132080
Inclination : 51.6231
R.A.A.N. : 218.9514
Eccentricity : 2.1473E-03
Arg. of Per. : 162.4727
```

Mean Anomaly : 197.6706
Mean Motion : 15.73824489
Drag Factor : 4.713E-05
Orbit Number : 16229
S.M.A. : 6726.04884

Satellite : COSMOS 1686
Object # : 16095
Element Set : 110
Date Issued : 15Dec88
Epoch Date : 88 349.85889971
Inclination : 51.6149
R.A.A.N. : 135.7270
Eccentricity : 3.216E-04
Arg. of Per. : 42.3093
Mean Anomaly : 317.5875
Mean Motion : 15.35462928
Drag Factor : 4.6396E-04
Orbit Number : 18148
S.M.A. : 6837.61523

Satellite : SALYUT 7
Object # : 13138
Element Set : 357
Date Issued : 15Dec88
Epoch Date : 88 349.59859607
Inclination : 51.6094
R.A.A.N. : 136.9828
Eccentricity : 1.245E-04
Arg. of Per. : 122.9263
Mean Anomaly : 237.2053
Mean Motion : 15.35402644
Drag Factor : 1.2498E-04
Orbit Number : 37977
S.M.A. : 6837.79421

Satellite : 88 104A
Object # : 19660
Element Set : 25
Date Issued : 15Dec88
Epoch Date : 88 349.84780012
Inclination : 51.6217
R.A.A.N. : 219.2741
Eccentricity : 2.0723E-03
Arg. of Per. : 164.0116
Mean Anomaly : 196.0079
Mean Motion : 15.73870814
Drag Factor : 7.8323E-04
Orbit Number : 287
S.M.A. : 6725.91685

This orbital data was obtained from NASA and compiled by KD2BD @ NN2Z.

--
UUCP: ucbvax!rutgers!petsd!tsdiag!ka2qhd!kd2bd
PACKET: kd2bd @ nn2z

331. Antique Radio Flea Market

Newsgroup: rec.ham-radio
Date: 1988-12-22 14:52:37 UTC
From: ewb@raybed2.UUCP
Message-ID: <1247@raybed2.UUCP>
Source record: 19620
Cross-posted to: rec.ham-radio,sci.electronics,misc.forsale,misc.wanted

The New England Antique Radio Association will be sponsoring it's 2nd
Antique Radio Flea Market on Sunday Jan 22, 1989 at the Holiday Inn
on Northeastern Blvd, Nashua N.H. Standard admission time 9:00 AM.
Early admission is available for an extra fee. Call the New England Antique
Radio Asso. at 603-623-8996 for more info. Mail address is 422 Days St.
Manchester, NH 03104
This flea market was very popular this year so they have moved into
a larger area to make more room for exhibitors and the general public.

332. Thanks!

Newsgroup: rec.ham-radio
Date: 1988-12-23 08:36:54 UTC
From: goldman@ferris.cray.com
Message-ID: <12357@ferris.cray.com>
Source record: 19621
Cross-posted to: comp.sys.atari.st,rec.ham-radio

Thanks to all who responded to my earlier request. There are
many people who sent me mail, posted a message or called even.

Thanks!

--
Matthew Goldman (612) 936-9675

I dream of ancient days...
.... .. - .... . .-. . .-.-.

333. Merry Christmas From Space!

Newsgroup: rec.ham-radio
Date: 1988-12-25 02:14:10 UTC
From: kd2bd@ka2qhd.UUCP
Message-ID: <725@ka2qhd.UUCP>
Source record: 19622
Cross-posted to: rec.ham-radio,sci.space.shuttle

```
***UOSAT 1 COMPUTER STATUS INFORMATION***

COMMAND DIARY V1.1 IN OPERATION
UNIVERSAL TIME IS 01:26:02
DATE 25/12/88
AUTO MODE IS SELECTED
MEMORY WASH POINTER AT 1E20H
LAST CMD SENT BY COMPUTER WAS 01H TO 0
LAST CMD RECD BY COMPUTER WAS 7DH TO 0 WITH DATA 19H

CURRENT WOD COMMENCED AT 00:00:00
DATE 24/12/88
SURVEY INCLUDES CHANS 08,18,22,

**** UOSAT-OSCAR-9 Bulletin-253a 20th December 1988 ****

UoSAT Spacecraft Control Centre,
University of Surrey, England

************************************************
** **
** M E R R Y C H R I S T M A S **ooooooo
** ** oo
************************************************ oo
oo oo
oo From all at UoSAT ! oo
oo oo
oooooooooooooooooooooooooooooooooo

UoSAT 'USER' SURVEY
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PLEASE REMEMBER to send a postcard/QSL/letter to UoS if you receive
UoSAT Oscar-9 (UoSAT-1) or 11 (UoSAT-2).

UO-1 SCHEDULE
-------------

The schedule for UoSAT-1 over the Christmas period will be modified from that
usually transmitted. From 22/12/88 to 03/01/89, UoSAT-1 will transmit a
sequence of 60 seconds of Telemetry, 60 seconds of Bulletin and 150 seconds of
whole orbit data. The whole orbit data channels will be as follows:-

Date Channels

22/12/88 22,23,30
23/12/88 35,36,37
```

24/12/88 8,18,22
26/12/88 22,23,30
27/12/88 1,11,21,31
28/12/88 1,22,30
29/12/88 53,54,55
30/12/88 19
31/12/88 23,43
02/01/89 1,23,49

The normal schedule will be resumed on January 3rd 1989.

*
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::::
::::

M E R R Y C H R I S T M A S
and
H A P P Y N E W Y E A R
from
The UoSAT Team

--
UUCP: ucbvax!rutgers!petsd!tsdiag!ka2qhd!kd2bd
PACKET: kd2bd @ nn2z

334. SpaceNews 26Dec88 SPC881226

Newsgroup: rec.ham-radio
Date: 1988-12-25 23:51:08 UTC
From: kd2bd@ka2qhd.UUCP
Message-ID: <726@ka2qhd.UUCP>
Source record: 19623
Cross-posted to: rec.ham-radio,sci.space.shuttle

Bulletin ID: SPC881226

SpaceNews

MONDAY DECEMBER 26, 1988

SpaceNews originates at KD2BD in Wall Township, NJ, and is available on
packet radio bulletin board stations across the North America and around
the world on the MTTBS telephone BBS at (201) 494-3649, and the Unix USENET
News Network.

* MIR NEWS *

The joint mission of six Cosmonauts on board MIR has come to an end as
Cosmonauts Musa Manarov, Vladimir Titov and Jean Loup Chretien returned
safely to earth early on the morning of 22 December. The two Soviet Cosmonauts
have spent 80 minutes short of one year in space.

The last few months had some big surprises for the Amateur Radio community
around the world, when U1MIR, U2MIR and U3MIR suddenly came on the air,
thanks to the effort of Musa Manarov. U3MIR, Dr. Valeri Poliakov, will remain
in space, but he speaks only Russian. Rumors indicate that the 2-meter rig
on MIR will be upgraded to provide an output power of 10 watts, compared with
2.5 watts at present.

* OSCAR-9 NEWS *

UoSAT-OSCAR 9 Weekly Operating Schedule :

TUE : Diary reload occurs. VHF-FM beacon is OFF the air.
WED : CCD Video transmission - 1200 baud synchronous data.
THU : Digitalker sends telemetry in English until 14:00 UTC.
After 18:00, the Diary will transmit a sequence of TELEMETRY, BULLETIN
and WOD using 1200 baud ASCII until next Tuesday, when a reload occurs.

The 145.825 MHz NBFM General Data Beacon is ON the air according to
the above schedule. In addition, the 14.002 and 21.002 MHz beacons
are currently active sending Morse telemetry and A0 using 100 mW
of power. The 2.4 GHz FM beacon is OFF the air.

* OSCAR-10 NEWS *

Ian, ZL1AOX recently reset OSCAR-10's IHU and has given approval for QRP
satellite use, except during the following parts of the orbit, or when

the spacecraft is "FMing". Please keep your TX power as low as possible.

DO NOT USE AO-10 : MA 30 to 90 Nov 29th to Dec 28th.

Listen to the AO-13 beacon for further updates.

* OSCAR-11 NEWS *
----

* SCHEDULE for Thursday..Tuesday 145.825 MHz FM *

Telemetry : 40 seconds
Digitalker : 20 seconds
Computer Status : 15 seconds
News Bulletin : 105 seconds
Digitalker : 10 seconds
DCE Message Titles : 60 seconds

* SCHEDULE for Wednesdays 145.825 MHz FM *

From 0000 to 1400 UTC:

Telemetry : 150 seconds
Digitalker : 10 seconds

Whole Orbit Data (WOD) Surveys will be transmitted continuously
from 1400 to 2359 UTC every Wednesday.

* Digital Store & Readout (DSR) Data *

Sundays : 0000 to 1200 UTC
Wednesdays : 0600 to 1800 UTC

...using 4800 baud on 435.025 MHz FM.

* OSCAR-12 NEWS *

After a month of silence, OSCAR-12 is working normally again. Some months
ago, problems were found in the power system, and later some malfunctions
in the command system occurred. In an attempt to remedy these conditions,
ground control decided to halt operation for a month in order to investigate
possible causes and adjust power conditions. After a month of rest, FO-12
is able to operate normally again. As power generation from the solar cells
and storage capacity of the batteries is decreasing with age, more recovery
time will be required in the future to expand the life-time of the spacecraft.
Intermittent operation is unavoidable.

The current operating schedule for FO-12 is as follows:

Mode Until
Date Time
----+-------+-----
D : 25Dec : 0217
JD : 30Dec : 2254
D : 31Dec : 0002

JA : 03Jan : 2322
D : 04Jan : 2228

Mode D : All transponders are OFF.
Mode JA : Analog transponder is ON.
Mode JD : Digital transponder is ON.

* OSCAR-13 NEWS *

This operating schedule should remain in effect until 06Jan89.
No Mode S operations are expected until later this month.

OSCAR 13 Operating Schedule :

Mode Mean Anomaly
----+--------------
OFF : 241 to 003
B : 003 to 175
JL : 175 to 200
B : 200 to 241

Bahn coordinates for OSCAR-13:

Date BLON BLAT
--------+-------+-------
27Dec88 : 209.9 : -6.4
03Jan89 : 210.1 : -6.9
----

* FEEDBACK WELCOMED *

Feedback regarding SpaceNews can be directed to me (John) via the following
paths:

UUCP : ucbvax!rutgers!petsd!tsdiag!ka2qhd!kd2bd
PACKET : kd2bd@nn2z

* NEW PATH! *

This week's SpaceNews can also be found under the USENET newsgroup of
sci.space.shuttle. If it is of interest, I will continue to post SpaceNews
weekly on this newsgroup also. All comments/suggestions are welcomed.

* JOIN THE RANKS! *

Amateur Satellite operations can be very educational, rewarding and fun, but
in order to communicate through any one of our "OSCAR"s, you must first have
an Amateur Radio license. For information on the requirements for earning an
Amateur Radio license in the U.S., write:

THE AMERICAN RADIO RELAY LEAGUE
225 MAIN STREET

NEWINGTON, CONNECTICUT 06111

* SOURCES *

Some of the news contained in this SpaceNews issue was obtained via
OSCAR-9, OSCAR-11 and the KA2QHD and NN2Z PBBSs.

* BID$ *

SpaceNews is available for UNLIMITED distribution.
Please use Bulletin ID: SPC881226 when posting this bulletin on packet radio
BBSs that support bulletin IDs. Thank you.

* NOEL *

Merry Christmas and Happy New Year to ALL!

>> SpaceNews is a production of KD2BD Software. All rights reversed. <<

<eof>

--
UUCP: ucbvax!rutgers!petsd!tsdiag!ka2qhd!kd2bd
PACKET: kd2bd @ nn2z

335. NOAA Decoders/Satellites

Newsgroup: rec.ham-radio
Date: 1988-12-29 20:16:06 UTC
From: charlie@oakhill.UUCP
Message-ID: <1756@radio.oakhill.UUCP>
Source record: 19624
Cross-posted to: rec.ham-radio,sci.electronics,sci.space

Satellite Trackers:

I am currently tracking the NOAA satellites and receiving APT data
on an R7000 in wideband FM mode. What I want to know is how SYNC is
derived from the APT format. I know what the modulation format is
but what is a GOOD way to extract the SYNC? or ... Do people ignore
the sync and instead depend upon stable sampling of the video to derive
a picture with little or no horizontal precession of the picture from
'top' to 'bottom'. I have seen 'asynchronous' systems like this
described. Any suggestions? Is there a good source of old G1 FAX
machines around that could be used for hardcopy? Any stuff for the
Macintosh? I'll be happy to share info with anyone receiving NOAA
or the Russian METEOR weather satellites. Thanks!

Charlie Thompson WB4HVD
Austin, TX